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PHOTO-ERA

July, 1917, to December, 1917, Inclusive

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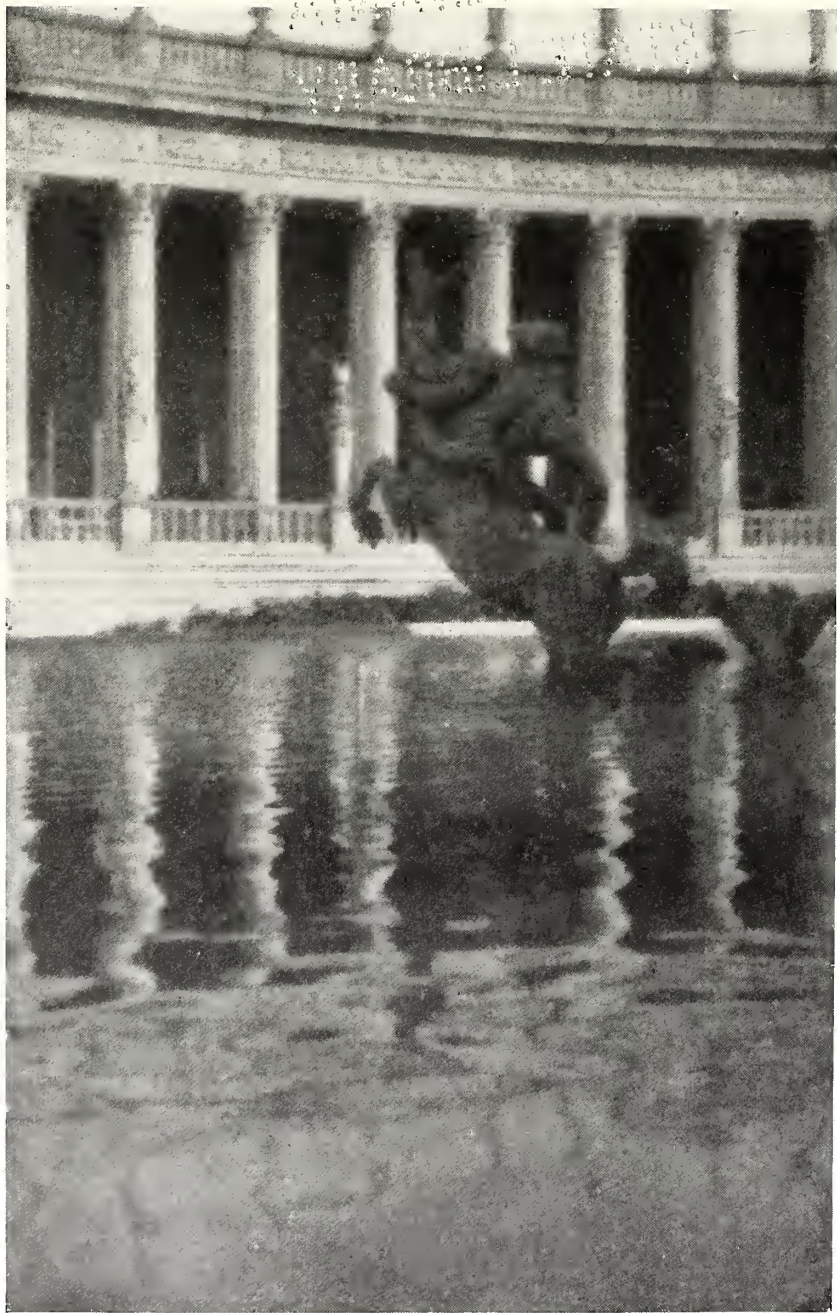
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BROKEN REFLECTIONS
COURT OF THE UNIVERSE

W. H. RABE

PHOTO-ERA

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No. 1

Reflections and Shadows

WILLIAM S. DAVIS

AS shadows or reflections play some part — often a most important one — in every picture, some understanding of the essential character of each is necessary to the pictorialist, together with a knowledge of how best to utilize them as aids to good composition. Unfortunately, some even use the terms shadows and reflections as if there were little or no difference between them. True, both are often present in a picture, and in the case of marine-subjects sometimes merge to such a degree that it is not astonishing that confusion should occur at first. However, the fundamental difference is this. A reflection is a more or less well-defined reversed image of objects, and always shows some indication of their natural color and tonal gradation. Furthermore, a reflection can occur only upon a surface capable of refracting light to a considerable degree — such as water, or a polished object of some kind. Shadows, on the other hand, are caused by a local diminution of illumination, brought about by an obstruction between the source of light and the part in shadow. Therefore, a *cast* shadow — unless affected by refracted light from surrounding parts — is virtu-

ally a flat-tone superimposed on the surface of whatever lies in its path, and instead of repeating the modulations of tone and color of the part casting it — as is the case with a reflection — the character of a shadow is affected by what it falls on. For example: a *shadow* of a red building with white trim and green shutters projected upon green grass would show simply a flat-tone of blue-green — a mixture of the local-color of the grass combined with some refracted blue from the sky; on the other hand, a *reflection* of the same subject in still water would give an inverted image, indicating clearly the differ-

ences in color and light-and-shade of the building. This holds good whether the scene is lighted from in front or behind, but if viewed against the source of light — when the sun is low enough to produce long shadows, the latter falling toward the observer — will mingle with the reflection and flatten it, to some degree. Under certain conditions *both* reflections and shadows can be seen plainly at the same time. This is most often the case in nature where shipping is lighted from one side — the reflections falling, of course, toward the observer — and the shadows are thrown horizontally across the surface of



READY TO SAIL

WILLIAM S. DAVIS

the water. Similar effects are produced readily with still-life studies by arranging the group on a sheet of glass, or polished table-top, and employing strong side-lighting. Many interesting variations in the relative strength of the shadows as compared to the reflections result by altering the intensity of illumination and the tone of the reflecting-surface.

The matter of relative tone-values between reflections or shadows, and the objects which cast them, is of pictorial importance; but it is not safe to lay down too positive rules, because so many conditions may alter the effect that what proves

As a rule, lighter colors are reflected more accurately than dark tints. If the observer is looking from a low standpoint along the water's surface, the colors are modified by refraction of hues from the sky; but in looking down into shallow water the local colors of the bottom mingle with the darker colors of the reflection. If the bottom is dark, it is possible in these circumstances for the reflection of a dark object to appear deeper than the latter, providing the water is fairly clear. This transparency also allows the dark tones below to react upon the lighter portions of the reflection and lower their brilliancy.



THE SHADOWED HIGHWAY

WILLIAM S. DAVIS

correct in one instance would be all wrong in another. However, certain general points may be kept in mind by any one wishing to exercise some local control over the values of a print. In nature, reflections upon smooth, clear, deep water afford the nearest approach to complete duplication in tone and color of the solid objects above; but even under such favorable conditions reflections do not show as wide a range of contrast as is seen in the original. Usually, there is a general compression, or shortening, of the tone-scale throughout, causing the lights to be a little deeper and the darks somewhat lighter in the reflected image, though the difference may be most noticeable at either end of the scale, according to prevailing conditions. This flattening of contrast is very evident when the reflection occurs upon the surface of muddy, turbid water, although details may be very well defined and clear cut.

When water is muddy, or the surface is broken by a breeze, the darker values of a reflection are lost before the lighter ones; in fact, reflected highlights are always present in some form, even when the waves are so rough that all semblance of an image is gone. In considering the subject of relative values, it should not be forgotten that a reflection often reveals some portion of an object not visible to the eye, and in judging the effect in nature this must be kept in mind. Thus, the reflection of a wharf will show the shaded underside of the planking — as seen between the piles from the water's surface — although the spectator can see only the upper-side in full light. Again, if one is looking down upon a boat stern-on, only the fully lighted portion of the stern and quarter may be visible, though the reflection shows the shadows under the counter. An excellent example and diagram illustrating the optical law, that

the angle of reflection is equal to the angle of incidence, appears on page 94 of the August, 1916, PHOTO-ERA.

Reflections upon a polished surface, like a table-top or burnished metal, are subject to similar tone modifications to those already mentioned, being affected by the tone and color of the surface, the degree of polish, and in addition whether flat or convex. Many curious distortions occur on the rounded surfaces of bowls and vases. Shadows may be either lighter or darker than the objects casting them. This is determined by the tone-values of the surface upon which they fall, although the general contrast between the depth of the shadow and surrounding parts is controlled by the intensity of the illumination surrounding the subject.

The shadow of a white building thrown upon a smooth lawn would naturally be much darker than the tone of the shadow-side of the building, since the *relative value* between a white object and grass in shadow is approximately that between grass and a white wall in full sunlight. Reversing the idea, however, and noting the shadows from something comparatively dark, like a tree-trunk, upon white walls or sunlit snow, we find them considerably lighter in value than the shadow-side of the object itself. When an object, and the surface receiving the shadow, are the same in color and surface-texture, one may expect to find the cast-shadow and the shadow-side of the object virtually uniform in value, unless the local effect is altered by the introduction of refracted light from the surface of some near-by part. Another combination of relative values is brought about when the shadows fall to one side and somewhat away from the spectator, thus making prominent the *lighted side* of the objects casting the shadows. With such lighting, it might be possible for a shadow upon snow, for instance, to be darker than the sunlit trunks of some trees — such as the white-birch and poplar, to name two of such examples.

In considering the subject from the standpoint of composition, the important thing when reflections are part of the material used is the avoidance of divided interest between them and the solid objects. Attention must be concentrated upon one or the other to obtain unity and strength. Although the repetition of dominant lines and tone-values is adopted frequently as a means to produce rhythmic quality in a composition, there is a decided difference between this and absolute duplication of parts. Hence, it



SUN-SPOTTED

WILLIAM S. DAVIS

may be taken for granted that a perfect reflection of much size is not pictorially desirable — the feeling being much improved when the clearness of the inverted image is broken enough to differentiate it from other parts. This, likewise, gives surface-texture to the water in a marine-view, and greatly helps to preserve the sense of its being a flat plane receding gradually from the eye. Gentle ripples produced by the tide, or a light wind, cause charming variations of the image, and in the case of rainy-day street-scenes the roughened surface of pavements, or the ruts in a country-lane, break up the reflections in a satisfactory manner. The natural flattening of contrasts likewise proves advantageous when one wishes to make the reflections take secondary place in the picture.

When it is desired to make the reflections the motive, it is generally best to show only a portion of the objects which produce them. Many examples of such treatment are to be found in the work of Frits Thaulow, the Norwegian painter, whose reputation rests largely upon his handling of reflections, usually shown in running-water and winding streams brought into the immediate foreground, and the distance is filled with foliage cut off by the top-margin of the pic-



A WET MORNING

WILLIAM S. DAVIS

ture. Aside from the elimination of unnecessary material, such treatment renders possible the logical placing of the light-accent of the composition in the water, for though the sky is excluded from the field of view it may, nevertheless, appear as part of the reflected matter, and the same often applies to light-objects which may form a part of the scene. Although not an absolute necessity, it is usually helpful when reflections fill the larger portion of the composition to bring into the immediate foreground some solid material of simple, harmonious character, thereby giving stability and — by contrast of tone — accent to the delicate elusive quality of quiet water.


Shadows play such a diversified part in pictorial work that only a few features can be touched upon here. For, aside from furnishing many of the stronger tones needed in the average picture, their shapes must be taken into account as of equal importance to any other portion of the composition. As a matter of fact, the student, when considering spacing and the shape of various tone-spot units which go to form the pattern of every picture, has to think in terms of light and dark, no matter how these are produced. Not only do east shadows often add interesting detail

to the foreground, but their location and general trend afford a means of directing the eye toward almost any part of the composition. They are also very valuable for the purpose to correct some top-heavy or lop-sided arrangement of stationary parts; since they are constantly changing from morning till night, a wide variety of effects is available from which to choose. Just as suggestions: over-prominent vertical lines, such as produced by tall trees or buildings, may be given greater stability if oblique or horizontal lines are introduced in the foreground by means of shadows. Interest is best focused upon some spot in the middle-distance by keeping the foreground altogether, or largely, in shadow; and, because of the laws of contrast, a concentration of deep tones in the parts nearest the eye adds greatly to the sense of perspective; but with a flat foreground it is seldom possible to obtain this depth of tone except by east shadows. Much more might be said; but, after all, the best service such notes as these can do is to prepare the way for personal observation and analysis.

PERFECTION should be the aim of every true artist.— *Ludwig van Beethoven.*

Courtesy and Tact as an Asset in Press-Photography

CRAIG McKAY

T is somewhat astonishing that in view of the fact that every town of any size now has its recognized news representatives for London and other big newspapers, more professional photographers, equipped as they are with technical understanding and instrumental aids, do not self-constitute themselves the "local press-photographer" for given papers or groups of papers. Certainly many already do this, particularly in the United States and Canada; but in this country the number is still astonishingly small.

Yet a letter or two to some of the newspapers and news-agencies would give many an expert local professional the right and permission to represent them locally at any important function, together with such letters of introduction and requests as would gain the necessary permissions for press-photography at any time. And, further, such letters of arrangement with the metropolitan and provincial press would entitle such photographers to ask for local permissions to photograph anything unforeseen, such as an accident on the railway, or a great and disastrous conflagration or shipwreck. Now the average professional is so accustomed to being *sought* by his customers, that he does not realize quite what a very different business press-photography can be.

It is very seldom that the camera-man from a newspaper is *invited* to photograph. But so far the ordinary and portrait professionals who do not use modern methods to *seek* business (such as home-portraiture) occasionally are found to adopt an almost amusing attitude. From some mistaken assumption of — possibly — "professionalism" there are all too many professionals whose receptional manner is that of one actually conferring a favor, and certainly not asking for one. In any other business the man who offers and gives services makes it clear, quite courteously, that it is he who gets the favor! His customers are regarded more or less as his "patrons," even. However, this is not quite to the point in mind, though the difference in the two callings must be explained. The press-photographer must seek his work.

It is desired to give professionals a few hints relative to the personal factor in the equipment of a good press-photographer. These are culled both from study and wide experience of modern journalism and press-photography. Now, out of

the various good things which make up the successful mentality of a first-rate press-photographer, courtesy and good nature are marked as necessary qualities. They are, indeed, absolutely essential if he is to *succeed*. These, and tact, resourcefulness, and quickness of vision and brain. If there be courtesy and good nature already present, many of the other qualities will arrive by their side and march with them as the photographer progresses in press-work. No man makes a greater number of new friends and acquaintances than the man whose work it is to carry some newspaper's camera. Like the older journalist, the reporter and special, he is always making new friends, in all classes and circles. He is always introducing himself to some one or other. It is part of his work.

He must therefore *cultivate* good nature, and also courtesy, if he lacks it in the smallest degree. Good nature, indeed, connotes real courtesy. A good-natured man is a smiling man, a kindly and a well-mannered man. The great war-correspondent, F. A. Mackenzie, has said that even in China he found the value of a smile to be greater than all else as a producer of the general goodwill which makes a pressman's work easy. A laugh, he found, was of more value than money when among strange people, and greater protection against danger even than firearms. Baden-Powell has said much the same thing: "A smile and a stick will carry you anywhere." And when you meet with any of the first-rate press-photographers, you will always find that these men are full of good nature, ready smiles and friendliness, the ingratiating manners of sincere goodwill and tact. That is even a reason for their success in their position. That most successful press-artist of recent times, the late Melton Prior, was always a man of good nature and the ready smile. He advised his younger comrades to *cultivate* these qualities and the personal art of being able to "mix" well — to meet all people on good-natured terms and with pleasant courtesies. This was sound philosophy. Good nature is more than a virtue; it pays! It is life's lubricant. Time and again press-photographers who have been barred at the police barriers by some official who does not know them have espied amongst the company some officer of higher rank whom they have once met on very friendly terms in the course of business, and so gained their desires and got their pictures. I know of an instance: a *Daily* — man was



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BROWN AND DAWSON

WOMAN TO THE RESCUE

stopped at Oxford Circus by the police cordon, when sent to get pictures of the presentation of an address to the King of Greece (I believe, the late King). He could not get past. Spotting an officer he had met before, in similar circumstances, and to whom he had sent a print, by request, he caught the policeman's eye. "Hello! You here?" said the burly man of the "Metropolitan." "Yes, and I can't get through to secure my pictures." "Oh! we'll soon see to that, sir! I know you very well indeed, and your paper, too. The superintendent is over there and I will go and speak to him." In less than five minutes my friend was alongside of the mayoral canopy and given a position to photograph. And now *once more* his friendliness was to serve him well: the Mayor of Westminster, at that time, was a certain peer. This peer had met our pressman at some previous function and recognized him when saluted. A few words interested the nobleman in the camera-man's professional presence at the function, and he secured for him a vastly superior position to the one given by the police officer, with the remark: "You will get the best views of everything from here; but I give it to you only because I know from our last meeting that you are a man who will not take any advantages or exceed the opportunities given him." This statement of actual fact and experience is given to show readers that even courtesy extended to a constable (as the forwarding of a print) can help to great opportunities in the important moments of this

work, and that the other sign of a pressman's courtesy — *the faithful observance* of restrictions, etc., mentioned when a "good position" is afforded — will also stand him in good stead "some day."

I know of another case where the pressman had full permission to photograph an arrival of distinguished Russian royalty at Victoria Station, but was stopped by a royal detective. Even the statement that English royalty present had been asked for permission by the friendly railway authorities did not move this adamant Scotland Yard officer. Now the pressman did not attempt to argue; he swallowed his disappointment and stood back, and, of course, lost his pictures. His courtesy and tact were amply rewarded after the arrival by the sudden coming up to him of the previously severe detective inspector with this remark: "I have now heard that photography in your case would have been perfectly in order, and I'm therefore sorry you have lost your pictures. However, I did not know you; time has been most short, and my work here to-day full of heavy responsibility. I appreciate your conduct in not 'arguing' the matter, and when I have any chance to help you at a future time I will do so." Now that same detective gave our friend many a good opportunity on similar occasions in the future; he approved of the man's conduct, and rewarded him as promised.

Good nature, courtesy and tact are qualities every would-be press-representative must culti-

vate to the full. Get on good terms of friendship with any and every one who may some day be able to *assist* you to get good photographs of news happenings: the police, all local bigwigs, railway-officials — in fact, everybody who is anybody in an official way, in your locality. If there is time, always get permission to photograph be-

fore the event; but when, as so often happens in newspaper-work, it is the unforeseen that you are to photograph, or when conditions are suddenly changed and even responsible officials altered, then you will find these friendships and rewards of courtesy and tact serve the photographer well.—*British Journal of Photography*.

The Photography of Wild Animals in Captivity

D. SETH-SMITH, F.Z.S., M.B.O.U.

IN acceding to the secretary's request to deliver a lecture explaining my methods of photographing the wild creatures contained in the collection of the Zoölogical Society, I am only too glad to give any hints I can to the photographer who wishes to take animal-pictures; but I am afraid that I employ no novel methods that the average amateur does not fully understand. I have no magic power over the animals that makes them pose for their portraits when I require them to do so, and so I am afraid that if any one has come here to-night expecting that I shall reveal some wonderful method by which one can compel the animals to do as they are bid, and offer opportunities to take their portraits that are denied most people, he will be disappointed.

All my life I have been devoted to the study of Natural History, specializing in Ornithology, the study of birds, and for some years past my work has been intimately connected with the fine collection in the Zoölogical Society's Gardens in Regent's Park, and one cannot live long with wild animals without noticing habits and incidents in their lives which one wishes to place on permanent record, and I do not hesitate to say that, as a means to this end, photography is the only method to adopt, and it is a method which, in most cases at least, is far more truthful than any other can possibly be. There are certain incidents in the life-history of animals which the artist with his pencil or brush may be able to portray in a more satisfactory manner than can the camera, but these are few, and the number of artists who can draw animals really well is very few, indeed. The rendering of incidents which happen rarely and occupy but a very brief space of time cannot be so truthful with pencil or brush as the record obtained in the fraction of a second by the camera. Take, for instance, the nuptial display of certain birds. The male shows off the beauty of his plumage to his mate in a wonderful manner, performing a complete trans-

formation in a period occupying but a few seconds. The artist who tries to depict this with his pencil must be able to carry every detail of the plumage of the transformed bird in his head, for he cannot set it on paper before the bird has long since reverted to its normal attitude. To portray truthfully such attitudes was one of the objects I had in view in taking up the photography of animals.

Take, again, the immature stages of animals, and consider especially that of birds. In many birds the young are hatched with a thick covering of down feathers, and in most cases they possess a distinct color pattern which is completely different to that of the adult. As the young bird grows, this pattern disappears and gives place to that of the parent. If one would wish to know and to be able to impart to others the complete life-history of such species, it is highly desirable that a record of this stage in the bird's existence should be obtained. Museum-naturalists would tell you that the proper thing to do would be to kill any such rare chick and to make it into a cabinet-specimen, as the immature stages of birds are very poorly represented in museum-collections. I admit that in certain cases there is some justification for this view; but at the Zoölogical Gardens our object is to keep animals alive, not to kill them, and I far prefer to get an accurate photograph. The same applies to mammals, in many cases. For instance, in the large cats, such as the lion and the puma, you find that the young are spotted, a condition which changes as they reach maturity.

Now as to one's method of procedure. The type of camera, of course, is all-important. It must be a Reflex. It is absolutely essential that one should be able to focus quickly and up to the second at which the exposure is made. I knew virtually nothing about reflex-cameras when I determined to possess one, although I had dabbled with other kinds of cameras for a number of years, thereby considerably increasing the profits of the plate-makers without adding much to my

stock of passable negatives. I happened one day to be passing Houghton's, and went in to see what reflex-cameras they had. I was so pleased with the look of their "Ensign" Reflex that I purchased one on the spot. I have never regretted my choice. The shutter and the lens are the two most important items in a reflex-camera, as, in fact, in almost any camera. The lens I selected was a Zeiss "Tessar" of 6-inch focus working at F/4.5. The shutter in these cameras is one of the simplest to manipulate, as there is no elaborate calculation to be made as to tension and aperture. All one has to do is to wind the shutter until a pointer comes opposite to the speed one requires, whether it be a tenth or a thousandth of a second. When one has one's attention fixed upon some bird, with the object of noting some particular attitude which it is desired to figure, one does not want to be bothered with calculations.

Rapid exposures must be made, for animals rarely keep still unless they happen to be asleep, and one seldom wishes to work at a slower speed than $\frac{1}{10}$ of a second, except, perhaps, in photographing tortoises or snails; but nevertheless there are occasions on which one would like one's shutter to work rather slower, especially in dull winter-weather. I found the 6-inch lens quite useful; but for birds and small animals, generally, I wanted something of rather longer focus that would give a somewhat larger image on the plate, and I obtained an 8 $\frac{1}{4}$ -inch Ross-Zeiss "Tessar," which I have found a most excellent lens for all-around work in animal-photography. For photographing animals at a distance, such as ducks on a pond, when one wanted to pick out one particular specimen and portray it accurately, I obtained a Ross "Telecentric" lens of 13-inch focus, working at an aperture of F/5.4, and this has been useful on several occasions, but it has its faults on a hand-camera. It is very heavy, and to manipulate the camera satisfactorily with so much weight in the front is none too easy. On the whole, the 8 $\frac{1}{4}$ -inch lens with an aperture of F/4.5 has served me best, and if I had to be content with one lens only, I would be satisfied with this one. Of course, the two "Tessars" were purchased long before the War.

As to plates, I have tried several brands, and should not like to say that any particular one is the best. One must have something that is fast, from 300 to 400 H. and D. I generally use Wellington 'Xtra Speedy or 'Xtreme plates, which have speeds of 350 and 400 H. and D.

One difficulty in photographing animals in the Zoological Gardens is in the fact that these being so accustomed to be fed by visitors are apt to approach too close to the bars of their cage, and

in such cases it is a good plan to be provided with a few bits of biscuit or some monkey-nuts. A tasty morsel thrown to the back of the enclosure will entice the animal thither, and it can be snapped as it turns to come back. Wire-netting as used for most of the cages does not worry one in the least, because if the lens is held quite close to it, it does not affect the picture. It is so much out of focus as to be invisible.

It is generally advisable to consult the keeper of any particular animal one desires to photograph, as he can often coax it into a favorable attitude. If one has time to wait one's opportunities, one can generally be sure of some good results, providing one has plenty of patience, the right kind of camera and plates. Perhaps I have unique opportunities to get good photographs of the animals; but unfortunately my time is so fully occupied in other directions that I can spare very little for photography, and the pictures that I am about to show are a selection taken over a period of five or six years.

After reading his paper, the lecturer showed a large number of lantern-views illustrating various mammals and birds in the Zoölogical Gardens. Of special interest were several showing the displays of certain birds as a means of sexual attraction, and also the young of various creatures at stages rarely seen by the ordinary visitor to the Gardens.—[*Paper read before the Royal Photographic Society.*]

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To say that you have done your best towards the partial or complete attainment of an object, however great its difficulties, may afford you temporary or even permanent satisfaction, and may seem to justify you to cease to make further efforts.

It is but an admission that you have reached the limit of your resources, physical or mental, and that is not the spirit of true progress. It is moral apathy. A performance, unless it emanates from a masterful genius, must receive the approval of competent judges to establish its true worth. Without such support, your best effort—as you regard it—avails little in the field of meritorious endeavor. Else, you can never hope even to approach the final stage of perfection, much less do justice to the gifts with which the Divine Creator has endowed you. You should ever be the student—striving for improvement and giving your powers the best possible expression. The best of to-day should be but the least of to-morrow. Always feel that you can better your best.—WILFRED A. FRENCH.



GEORGE EASTMAN

Burson Unburdens His Mind

MICHAEL GROSS



HAVE any luck tracking down the elusive order?" asked Art, looking up from a tray full of prints that he was re-toning. Burson, who had just come in from a hard day spent in trying to get business, merely grunted, then proceeded to sprawl himself out at full length on one of the work-benches. When he was comfortably settled, with a focusing-cloth under his head and both feet resting on a camera-case, he answered Art's question more fully. "I called on Shevling, the buyer for the Melville Company, to-day, and got that little order he promised us. Don't I look it?"

"You surely do," Art answered with a smile; "is he still as mean as he was when I used to call on him for my old boss?"

"Getting worse every day," Burson groaned. "I did n't like that fellow the first time I saw him, and I like him less after each visit. If Shevling would only stop trying to be funny," he went on, "I might be able to stand him. Do you know the way he greeted me when I came in to see him to-day?" and without waiting for Art to ask, Burson hastened on, "he laughed that disagreeably agreeable snicker of his, and said, 'Well, if here is n't the village-pest once more. What ill wind has blown you in here?' Can you imagine that for an encouraging reception? Of course," Burson fumed, warming up to the subject, "I don't expect a brass-band to wait outside the building and welcome me every time I call on a customer; but I certainly object to being handed an Alaskan blizzard."

Art smiled at the other's vehemence. "I'll admit that all you say about Shevling is true," he said, "but remember one thing: in our present circumstances, we cannot afford to pass up a man who gives us business just for the reason that we don't like the way his face opens when he laughs, or because he takes a fiendish delight in regaling us with ancient, would-be jests, or for any other personal eccentricity he may have. Until we get to the time where we can pick and choose our customers, I'm afraid, Burson, you'll have to be all things to all men, and make all you meet like you, Shevling included, whether you like them or not."

"I guess you're right," Burson admitted, "and just because Mr. Shevling does give us a little order now and then, I'm going to grit my teeth and put up with everything he hands me. But I solemnly warn you, Art, that the very first

minute we're in a position to do without him, I'm going to cut Shevling loose so fast he'll get paralyzed from the hips down. Not only that, but I'll make it my business to tell him just what I think of his methods, before I say my last good-bye. See if I don't."

"I won't blame you a bit," Art assured him, "and I hope that the time'll come soon when we have business enough to make it possible for us to select only such people as we like to work for."

And there the matter rested.

The next morning's mail contained a postcard from one of Art's old customers. It was signed by the president of the concern and requested Art to call at his earliest convenience.

"That looks as though it meant business," Burson ventured, as he glanced at the message.

"You bet it does," Art answered warmly. "Mr. Tomlin, the man who wrote that card, is head of the concern and does all his own buying, although I've often wondered how he finds time to do it, for he runs his factory as well. It's a safe bet that he has something big for us to work on."

"I'll come in early to-night to hear the good news," were Burson's last words as he left; "be sure to have some for me;" and, true to his word, at four-thirty he was back, to find Art wreathed in smiles.

"Well, you're going to get your chance to tell Mr. Shevling what you think of him," he burst out, as soon as Burson came through the door, "because we can now do without his few measly orders. Mr. Tomlin," Art went on excitedly, not even giving Burson a chance to get his coat off, "has promised me an order in two weeks from to-day, sure, and it's going to be a real order, too. I could have taken it this morning, only he wants to get the whole sample-line together and see just what he needs, before we start photographing."

"Bully for you," Burson said enthusiastically, "I guess the order is as good as in when the president of the concern says he is going to give it to you."

"You're right, there," Art agreed, "and I know Mr. Tomlin is as good as his word."

"Well, then me for Shevling to-morrow," said Burson. "He is just about due to hear a few things that will open his eyes."

The next morning, bright and early, Burson started for Shevling's office, with blood in his eye and murder in his heart. He stormed into that worthy's sanctum, and before Mr. Shevling



THE MORNING-GALLOP

G. H. SEELIG

had a chance to open his mouth, Burson was at him, with a well-prepared flow of linguistic fireworks. Ten minutes after he had begun to talk, Burson ended up in a grand flourish with the words: "And now that you know exactly what I think of you, please find some other salesman, who, for the few little orders you might give him, is willing to take all the cheap comedy you find such a delight in handing to innocent callers. We're through. The firm of Burson and Condit would rather starve than take another order from you. Please remember that!" with which parting shot Burson slammed his way out, relieved and triumphant, leaving Mr. Shevling huddled in his chair, seemingly shriveled up by the fiery blast of language to which he had been subjected.

At the end of two weeks, Art went out to get the big order. Burson, eager to pitch into the job as soon as it came into the house, stayed in that morning and waited for his return. About an hour later, Art came back, but instead of his habitual smile, he wore a look of deepest gloom.

"What's wrong, Art," Burson asked eagerly, feeling instinctively that things had not gone according to schedule.

Art looked up and smiled, with his mouth only. "As a matter of curiosity," he questioned abstractedly, "did you tell Shevling we would rather starve to death than take another order from him, or that we would n't take one until we were starving?"

"I mentioned something to the effect that we would starve first, I believe," Burson said impatiently. "But what's that got to do with your account?"

"Nothing at all," Art said sadly, "only we might as well start starving now, unless we put one of the cameras in pawn." Then, answering Burson's puzzled expression, he went on: "When I got to Mr. Tomlin's office this morning, and handed the girl my card to take in to him, she told me that Mr. Tomlin had been so busy lately, inside the factory, that he had hired a man to take care of all the purchasing of supplies. This man, she further said, had complete charge and



PIERCE-JOHNNOT-NICHOLS HOUSE, SALEM, MASS.

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FRANK COUSINS ART CO.*

would place all orders in the future."

Still Burson failed to understand, and Art, noticing his perplexity, went on wearily:

"Can't you imagine the rest without making me prolong the agony?" he asked. "Well, if you must have all the gruesome details, here they are: I asked the girl to take my card in to the new buyer, and in a minute or so she came back with the message that I could go right in. I walked to a little office in the rear, pushed open the door, and faced the new man; the fellow Mr. Tomlin had hired for the express purpose of doing all the buying, and whose word was to be law in the department, that gentleman, my dear Burson, was none other than our mutual friend, Mr. Shevling."

Burson groaned out loud. "Good night!" he muttered, half to himself, "and after all that I told him. It's a wonder he did n't kill you."

"I got out too fast," Art said, "but he killed our order, and that's bad enough, is n't it?"

Burson agreed that it was, and they both re-

mained silent for awhile — a sort of brief requiem for the repose of the soul of the order that might have been. Finally Art broke in with: "I tell you what, Burson, let's decide right here that a thing like this will never happen again. Hereafter we're going to work on the theory that God sends us our customers in the same way that he sends us our relatives, and that we've got to put up with them as he sends them to us. We still retain the privilege to choose our friends for their congenial ways, but we're going to do business with our customers the way we find them. If there's to be any changing it will have to be on our side. We'll have to learn to adapt our moods to the moods of our customers, and stop letting them get on our nerves. This little incident has knocked about seventy-five percent of the sensitiveness out of me, I can assure you."

"Seventy-five percent?" Burson said in surprise. "It's knocked a hundred and ten percent out of me, and, take my word for it, the cure is complete."

Sky and Clouds in Photographic Views

DR. A. MIETHE

THE contrasts of light and shade are immeasurably greater in open nature than in the studio. In the latter the mode of lighting, the brightening of the shadows, may be regulated by suitable appliances and the general distribution of the light, and equalization of contrasts is controlled by the window-surfaces and the reflecting walls of the room. In a well-lighted studio the lights and shadows should certainly be clearly defined; but the difference between the highest light and the deepest shadow is comparatively slight. Therefore, in such a room, the photographic plate may be counted on generally to give a satisfactory reproduction of the subject. The difference in the light gradation between the brightest point and the darkest surface is probably not much greater than that between the white surface of the photographic paper and the deepest black of the silver-deposit in the print. It is not necessary to reproduce excessive light-intervals in the subject within the limits of the comparatively restricted scale of light-gradation of the print, and the tone-scale of the original may be fully expressed in the copy.

It is different outside in the open. There, the light-contrasts, generally speaking, may reach any desired value. Between the deepest shadows in the foreground — the opening of a cellar-way, for instance — and the gleaming rays of the sun, or even of the clear-lighted sky, the difference in the light is so enormous that no print can give anything near the actual impression. In order to represent this immense difference in lighting, the painter employs different means from those of the photographer. Since, in his work, the former is also unable to avail himself physically of the differences of lighting, he uses a series of extremely effective physiological means to reproduce the sensation of the highest individual tone-values, of dazzling brightness alongside of deep darkness. The means he uses here are the contrasting colors; he strengthens the scale between white and black, which in reality only exists through the multitude of gradations that may be produced by warm and cold color-tones and which increase infinitely the range of his representation. Black-and-white photography does not possess these means; but even in it the effect of contrast will do a great deal towards improving physiologically that which is physically unimprovable; but photography can never reproduce perfectly the impression of reality, the full bril-

lance of the light and the blending of the deep shadows.

However, aside from these considerations, in the reproduction of objects rich in contrast, photography is not in a favorable position to control the gradations of light within the small range at its disposal. If we have contrasty objects to photograph, there is always the danger that, owing to the nature of our materials, many rounds in the light-gradation ladder may be lost.

To return to our subject: If we had to photograph an open landscape with bright clouds in the sky and deep shadows without lights in the foreground, in whatever way we might expose, the resulting picture could not take in this immense difference in lighting. With the shortest exposure the highest lights in the scale would be about right. The differences of tone-value in the bright sky, the details of the clouds, the gradations of their lights, will, under certain conditions, be finely rendered in the negative. But on the whole, according as we succeed to reproduce these highlights in their proper gradation, so will the photographic plate fail in the deep shadows. We get no details in the foreground, and even the middle-tones combine with the deep shadows in an all-pervading and detailless mass of shade which gives our picture more the appearance of a night-view than of one taken in daylight. If we expose for the shadows the reverse takes place. The highlights are all blended in one, and even the middle-lights have a uniform tone, and gradation begins only with the darker portions and will perhaps extend to the deepest shadows. The indication for this condition of things is the old rule: "Expose for the shadows or expose for the lights, expose for the landscape or expose for the air." In this expression is shown the impossibility of compressing the natural light-contrasts into the limited tone-scale of a photograph without suffering loss.

This impossibility is due directly to the nature of the photographic plate, in which, as is well known, the intensity increases with the quantity of light over a comparatively limited range of exposure, although with a shorter exposure it occurs only to a very limited extent; and with a longer exposure it does not take place at all, because then the so-called solarization begins. Therefore, if we have very contrasty subjects to photograph, the masses of shadow with their gradations must come within the range of under-exposure wherever there is either no action or

the differentiation of the plate is too weak. The brighter lights, on the other hand, fall within the range of overexposure where the tone-scale of the plate is incomplete, or into the range of solarization where the action of the light appears to be reversed, rather than within the range of correct tone-values. This peculiarity of photographic plates is chiefly what limits their capacity of expression, and to get rid of this fault is one of the most difficult tasks of dryplate technique; that is, to produce a plate whose tone-gradation shall have the greatest possible range with relation to the subject.

But even if — as may be expected within no great time — the range of gradation of photographic plates shall be appreciably increased, there will always be cases enough in practice where even the longest scale will still be insufficient. In landscape-photography the conditions are especially unfavorable, since the light of the sky is very rich in blue rays, and in reflections from these rays from objects on the ground the blue is appreciably lacking. In summer-landscapes, at least, the foreground is as a rule extremely poor in refrangible rays, although in the middle- and background — in consequence of the so-called “atmospheric perspective” — the blue rays increase constantly and reach their maximum in the surface of the clouds and the clear sky. Hence the quantitative contrasts of a landscape are strengthened farther than the qualitative ones.

Now the color-sensitive plate, in conjunction with a yellow filter in certain cases, is a well-tested and extremely effective remedy against this qualitative difference. For landscape-photography the color-sensitive plate is in fact indispensable. Only in rare cases can it be done without if one wants the best results. But even it frequently fails, especially just where the reproduction of atmospheric details is desirable. With such plates there is no difficulty in the way to reproduce winter-landscapes with snow and sunshine, so that not only the details of the foreground but those of the atmosphere are brought out; but with the considerably greater light-contrasts of a summer-day and the strong absorption of the light by the vegetation. A simultaneous reproduction of the foreground and atmospheric details is not always successful.

For a long time efforts have been made to remedy this drawback by artificial means, and the cloud-landscape is the last resort of the landscape-photographer in his attempts to give his pictures more character and artistic quality. But one should understand clearly that this is a two-edged instrument and, precisely from the artistic point of view, admissible only when used

in an artistic manner. To print any cloud-negative indiscriminately into a landscape can only lead to gross lack of taste. The cloud-negative and the view with which it is used must harmonize and be printed together in a proper manner. From the esthetic point of view, one thing particularly is needed that is often forgotten; horizon-clouds and those high up in the sky differ from one another decidedly in form, tone and space-arrangement. The effect of perspective on the cloud-forms is governed naturally by the same laws as perspective in connection with other things. Hence the impression of a correctly clouded sky can be obtained only when the clouds in the combination-picture are in the proper place, and not — as they are often seen — with those belonging high up in the sky placed near the horizon. Just as it is improper to place clouds contrary to their true position, so they should be arranged in harmony with their character. A cloud lighted from the right or the left, or nearly perpendicularly, always looks different from what the same formation would look like under other conditions; and when we often see landscapes in which the foreground receives the light from the right while the cloud-formations above it are lighted from the left, the impression given is far from artistic. Even if the observer does not recognize at once the cause of the unnatural effect, the latter will not fail to make itself evident. With regard to the technique of printing-in clouds not much can be said. Poor methods are scarcely capable of a change for the better. The attempt, for example, to put the outline of clouds directly on the negative by “dusting in” on the glass-side can certainly be made occasionally; but it is rare to see a negative that has the sky so lightly covered that this is possible. Therefore, one must almost always be satisfied to print a cloud-negative over the lightly printed picture or to do it by enlarging.

If one has a great many landscape-views to print, as when making postcards as an occupation, one needs to have a large stock of cloud-negatives at hand. Chances to make these occur frequently. Of course, good cloud-negatives can be made only with color-sensitive plates and a strong yellow filter, and in developing, to have the lightest possible covering of the dark portions with a view to the use to be made of the negative, should be striven for. A good cloud-negative should have clear glass in the shadows, while the highlights should be rather well covered, so that the desired effect can be obtained with the least loss of time.— *Das Atelier*.

Art and nobility of character should be inseparable.— *Johannes Brahms*.

DIXVILLE NOTCH, N. H.



EDWIN J. McLAUGHLIN

The Tone-Rendering Capacity of Papers of the Gaslight Group

JAMES THOMSON



JUDGING from the abundant output of photographic prints of a chalk and charcoal kind, the average camerist counts tone to be a thing of slightest moment. More especially has this tendency been marked since the gaslight papers as printing-media came prominently to the fore. It is claimed for the average landscape that it has a range in gradation of from 1 to 60 degrees. Much of this gradation is of a quality refined and subtle, half and quarter tones. Nevertheless it is a fact that there are a great many amateurs — principally, no doubt, of a button-pushing order — whose pleasure and satisfaction are confined to emanations wherein something less than half that number of gradation steps are present. Consider, too, the exquisite range of tone that, under certain conditions of light, the aspect of the human face assumes. To cultivated taste the photograph wherein such subtle distinctions of tone are expressed adequately has immense appeal. There are many persons of a different habit of mind who find just as much pleasure in contemplating a representation of human flesh that most resembles porcelain, and in some cases white paper. Indeed, white-paper faces are not infrequently to be found in portraiture efforts of an amateur kind. White-garbed figures in many an emanation have every appearance of being cut from chalk. Textureless, void of detail — all having disappeared in a deluge of halation.

The accomplished artist is sparing of pure black and virgin white. The ordinary photographic practitioner of an amateur kind is exceedingly lavish with both. We may run the entire gamut of tones from black to white, but not in the manner of the "soot and whitewash" photographic print. Harshness must not be confounded with brilliancy. A photograph may be in a high key or a low one; but in any event, there must be in it some accordance with truth. When, in a sunkissed landscape, everything in direct light has a whitewashy appearance, and all in deep shadow — including tree-trunks — an aspect of inky blackness, there is surely wide divergence from actual fact. A bald transcript of nature is of course not art, as a good many would-be prize-winners have discovered. The nearer the aspirant will be to the prize if he consents to abandon the practice of submitting contrasty prints. The constant complaint of the judges is the receipt of pictures that, because of a short

strip-range of gradation, they are obliged to reject unceremoniously.

Some eight years ago, when investigating the practicability of developing (gaslight)-papers as a medium on which to enlarge, I was led into an interesting series of tests in order that the comparative speed of brands and grades might be established with more definiteness. By this means I was made acquainted at the same time with the tone-rendering capacity of the various manufacturers. To the average snap-shooter this may seem a matter of small moment; but to the advanced worker — to the pictorialist and, above all, to the portraitist, both dealers in delicate shades of distinction — the subject cannot be other than of interest. Developing-papers are marketed usually as soft, medium and hard, and although there is uniformity — as regards available number of tones when contrast grades are involved — there is some diversity when the softer-working grades are considered. The "soft-worker" of one make may not be identical with the "soft-worker" of another. Special Velox is exploited usually as a "soft-worker," which, no doubt, is the case when compared with the Regular or Carbon Velox. But, as a matter of fact, it belongs in the same class as Normal Cyko. In general the worker depends on the label to guide him in his choice, and should he get too much contrast with one brand he simply falls back on another. In a general way we have come to accept the proposition that gaslight papers are much more contrasty than others. Just what that difference is, the average worker has no means of knowing. That Solio may be depended upon to give 60 gradations as against 40 in the case of Normal Cyko and Special Velox may surprise him very much. However, such is the fact, though all are presumed to be in the same class. Solio gives a practical range of 1 to 15 on the "gradometer," hence to expect identical results with a gaslight paper that cannot in two minutes get beyond the number 10 is futile.

In making the tests, a screen of forty gradations was employed, though in no case did the record go beyond 22. This screen is made from super-imposed sheets of onion skin paper. The need of so many gradations as forty becomes apparent where plates are involved. For a home-manufactured screen of so elementary a kind, scientific accuracy cannot be claimed; but for comparative purposes it is as good as any other.

Whatever imperfection there might be bears upon all papers alike. Conditions governing the test were the same in all cases.

At eight inches from an oil burner (Rayo lamp) each sheet of paper was exposed for two minutes.

a preponderance of Quinol in their composition, it was deemed best to try a soft-working developer in a second series of tests. The result in one instance was a gain of two numbers — a lengthening of scale and of gradation to that extent.

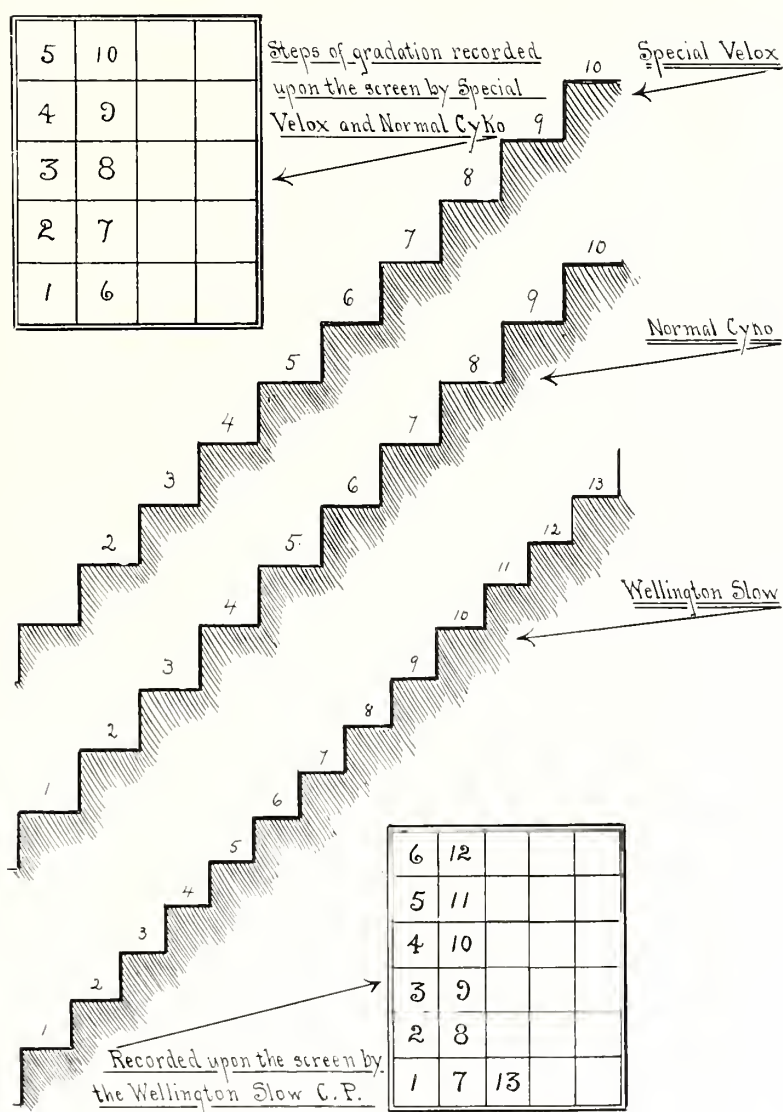


FIGURE 1

They were then developed in a strong metal solution, which, in addition to shortening exposure to a minimum, lengthened the scale of tones. In this connection it may be explained that in a prior series of tests the regular M. Q. developers recommended for the papers were employed. However, as they all tend to contrast because of

Interesting and significant — to the pictorialist and the portraitist, at all events — is the record born of the screen. The accompanying diagrams testify to the fact. In a period of two minutes Artura Carbon Black had succeeded in getting as far as 22, while Normal Cyko and Special Velox had only got as far as 10, nor could they be

forced to go farther. It was evident at that particular point that the limit of capacity for papers of the class had been reached. Landscape-negatives under the graded screen have been found to have opacities of from 1 to 50 or 60. Portraits, flower and still-life subjects — owing to deeper shadows — have opacities from 1 to 100, and in some cases greater. From these facts it is evident that no printing-medium having so low a gradation capacity as the regular grades of gaslight papers possess can do adequate justice. Nor do

the enlarger, the hard papers were banned as being at once slow and sooty. In the enlarging-apparatus there is a gain in contrast over and above that obtained in contact work. This is due to the *spreading of the light*, and is most marked when a large opening is employed. As the hard papers have such a short steep-range in gradation in any case, the results in enlarging are bound to be harsh unless a special flat negative is used. When — as happens many a time — the negative is of the undertimed and perhaps over-

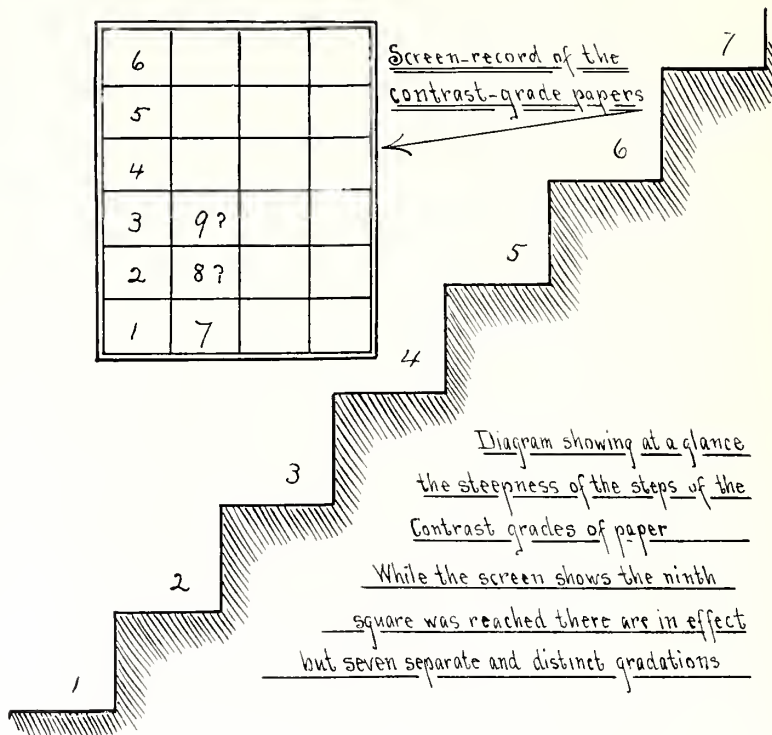


FIGURE 2

the normal grades, with their record of 1 to 40, suitably serve. Professional workers would not touch gaslight papers so long as there were available only brands of low tone-rendering capacity. Snap-shooters of limited photographic knowledge accept contrast paper readily enough if it is the first thing offered; although, as it happens, it is the least adapted to their needs. This accounts in part at least for the tremendous output of pictures wherein are coal-black shadows and chalky highlights. It matters not that a negative is of the contrasty overdeveloped kind. Hard paper is not infrequently chosen for the positive, thus making matters worse.

As the main purpose of the tests conducted was to determine the brands of paper best adapted to

developed type, then the resultant print is of a kind to set on edge the teeth of the person of artistic sensibilities.

To suitably round out this article as regards the actual tone-rendering capacity of hard papers, a test was made with Contrast Ryto, one of the newer aspirants for our favor. Although it managed to register itself on the ninth square, but seven separate and distinct degrees of radiation were visible. Its range of tone, therefore, may be set down as 1 to 28, a very limited scale indeed. The immense difference in tone-rendering capacity between such a paper as this and the "soft workers" should be noted. Compare the seven steps of Ryto with the twenty-two of Artura. The latitude of the regular or contrast grades of

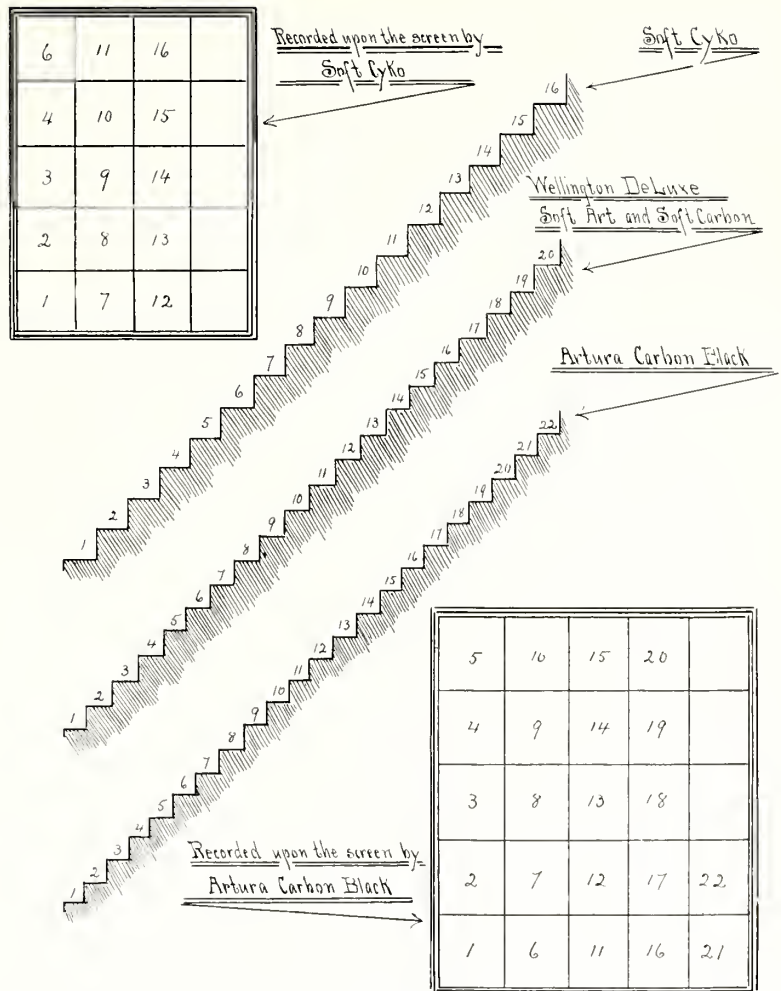


FIGURE 3

gaslight paper is practically nil. The scale of the normal grades may be lengthened to a trifling degree. With the soft papers, on the other hand, we can contract or expand at will. Taking as an example Artura Carbon Black: By doubling the exposure and diluting the developer, at the same time dosing it well with bromide, we can shorten the scale immensely. The "soft workers" are indeed mediums of great latitude and elasticity, and therein lies their special value to the advanced worker. They, for years, have responded to every personal need, and as enlarging-mediums they have been found invaluable.

In talking to a pictorialist who has made his mark, he surprised me by asserting that he had no luck with Cyko paper. I did not press him for particulars, but his declaration has often come to mind. I think I see how he had reached such a

conclusion, and it may be explained thus: For years he had been using P. O. P., which gave him an extended scale of gradation. Then, when he turned to Cyko of normal grade, he failed to get the delicate gradation he formerly had been accustomed to. Had he employed soft Cyko I am convinced he would have been suited. For the pictorialist and indulger in portraiture the soft-working papers are to be commended. To push the claims of any particular manufacture would savor too much of advertising. I have had considerable experience with Artura Carbon Black, and other brands of the Eastman line, have used a great deal of Soft Cyko and Special Portrait Argo, and found them all good. When I submit an enlarged picture in competition I always pin my faith on the "soft worker." It usually wins.

The relation between speed and sensitiveness

is of course close, and sensitiveness is again in close relationship to gradation. The speediest and most sensitive of gaslight papers are those with the longest scale of gradation. The capacity of the normal papers was shown to be such that while light could be depended on to affect them through ten sheets of paper it failed utterly when confronted with eleven. Attempts to force further action at the light end of the scale resulted only in a tremendous addition in the way of blackening at the dark end. Gaslight papers require treatment precisely opposite to that of the plate. Softness with the plate is obtained by prolonging the exposure and using a dilute developer.

For softness in the ease of gaslight paper the shortest possible exposure that *serves to impress the image is accorded*, followed by development in a developer *strong in metol* — 4 to 5 grains to the ounce — and with the alkali held down to a minimum.

Calculating the maximum at 24, the speed — comparative — numbers of various brands of paper may be set down as follows: Eastman (medium) Bromide, Artura Carbon Black, 4, Soft Cyko 3, Normal Cyko 2, Special Velox 2, Regular Velox 1, Contrast papers in general 1. Based upon adaptation to enlarging, contact practice may show some variation.

The Future of Photo-Surveying From the Air



AT least one after-result of the war can be foreseen with certainty, and that is the much greater importance that will in future be attached to good technical photography. A military photograph is of little use unless it is technically good, that is to say, sharp, clear and well defined throughout, and an enormous number of men are now being trained and practised in the production of such photographs, while at the same time it is becoming evident that the utility of equivalent results will by no means end with the war. Photography, of course, will still be an important matter in both the Navy and Army when peace comes, and it may be necessary to keep up establishments on a scale that before was hardly dreamt of; but beyond this there must be further developments. Military work is very much of the nature of survey work, and photography having proved itself so capable in this direction, is bound to be more and more relied upon.

Hitherto the surveyor has not made use of photography to anything like the extent that he might have done. He has used it more or less apologetically, feeling rather ashamed of himself for departing so far from the old well-tried methods of chain, level, plane-table and theodolite. Now, however, he is forced to realize that the camera-man in an airplane can do more in an hour than the old methods will accomplish in months. The airman needs only a base for his operations, and he can then produce very efficient and useful maps over a range of unknown country, that possibly the surveyor could not reach at all. An unknown and inaccessible islet can be charted by a navy airman in an hour or less in a fashion that cannot be excelled

by the old dodges of timing echoes or "tri-angaling" around the island from a distance. The one defect in such photographic results is that they will not record exact dimensions; but there are ways in which even this difficulty may be surmounted, and a great future may be anticipated for the airplane photograph and for airplane methods of mapping.

At present this branch of photography is really in its infancy, but the wonderfully good results that have been produced, under conditions of great urgency and high pressure, promise much greater things for the future, when apparatus and appliances will be made more perfect, effective and, probably, larger, and when no obstructively minded Fokkers are around to interfere. Of course, accurately scaled maps, plans and charts can never be superseded by photographs alone, but when one thinks of the cost, labor and time — probably years — that can be expended over one apparently insignificant hand-drawn result, and realizes that nearly as much can be depicted in a few hours by photography, the use of the latter is obvious. The little more that the proper survey will show is very necessary, but until it is available, the photograph may be an excellent substitute. We have already seen several specimens of airplane photographs taken over town and country that are quite as useful as maps for a great many ordinary purposes; better in some respects, as they give greater prominence to the more prominent features, whereas the regular map or plan often shows everything in a deadly monotonous and unaccented fashion. Stereoscopic methods naturally score heavily in this respect, and stereoscopy should play a big part in the future of aerial surveying.



GLEN ELLIS FALLS
GEORGE D. FORD



"STOP, LOOK, LISTEN!"

FANNIE T. CASSIDY

One of the most wearisome operations in surveying is that known as contouring, which involves any amount of hard labor in one probably quite desolate locality for weeks, or perhaps months, doing exactly the same thing day after day over very nearly the same ground. A few stereoscopic photographs from an airplane will show facts much more clearly than the best contoured map, and developments in measurement-methods may possibly relieve the surveyor of the worst part of his work.

Another direction in which technical photography should score — though we do not know how far it has yet been used for the purpose — is in the preparation of works-records and catalogs. In some works before the war it was the custom to keep records and catalogs of every detail of work done and of tools used, illustrated by minute marginal drawings; very trying to make, and taking much time. We know of one unfortunate draughtsman who nearly lost his eyesight over this work, and the greater part, if not all of it, could readily have been done by photography. Possibly, recent developments in the engineering-world have modified this practice, and drawn more attention to the possibilities of photography; but, if not, there should be in the future plenty of good technical photographers to point out the

possibilities and to prove them beyond all dispute. Work at fairly high pressure will probably be maintained and be absolutely essential in all factories for some time to come, and in the manufacturing-world there should be plenty of scope for the technical photographer and his time-saving methods.

Reverting to the question of aerial survey, it should be noted that it is the airplane that has rendered this matter of such importance. The balloon was practically useless for the purpose, not being under control, whereas the possibilities of photographic surveying from the ground-level were, at best, only limited. Those who have already had experience of airplane-work will probably be best qualified to go on with it and effect improvements; but there is evidently also a big field open to those of more theoretical knowledge, in the way of developing methods of securing measurement-records, and in what we may call the mathematics and geometry of photographic surveying which has to be reconsidered from a new point of view, that is from a somewhat uncertain position in mid-air, instead of from a fixed point or base on the earth. The problems that this new feature presents should be sufficiently difficult to be attractive to many.

The British Journal of Photography.

The Baby's Picture

GRACE COX RUTTER

TRULY, babies outclass all other subjects in the variable moods they present to the photographer. They remind me of the sky on a spring-day — no heavy wrathful clouds of the equinoctials, but a rapid changing of showers and sunshine. What a safety-valve it would prove to our feelings could we but spank some troublesome bit of humanity at times! But how soon we forget our vexation when smiles and dimples displace the squalls. It is a pleasant vocation, after all, if one has a sense of humor. The stock in trade of the successful photographer of babies partakes less of the manipulations of lights and the mixing of chemicals for a given result than it does of a generous amount of patience, good sense and a fondness for children. The former, one can learn: the latter should be inherent.

It is well that home-portraiture allows one such a latitude of lighting and arrangement, for it would be impossible to produce conventional studio-finishes from limited home-settings. There is no arbitrary law to place the catch-lights or relative shadow- and high-light-surfaces. The less we attempt to imitate the professional studio-worker, the more natural and pleasing our pictures will be; for what is crude or inartistic from a studio-angle is harmonious and life-like in a home-portrait. Our aim is the natural and unconventional, tempered by our inner vision of good taste in composition.

Normal babies are quick of movement, and often kick their feet and wave their arms simultaneously, so

that it seems almost hopeless to get them quiet long enough even for an exposure. But their clothing is all in our favor, for white helps to make a brief exposure sufficient, since the sensitive emulsion is affected first by white draperies; then, too, the white dress reflects — to a certain extent — light on the hands and face, and thereby shortens exposure. Baby-faces appear best under an open light; strong shadows or contrasty effects in backgrounds result in a rather unfinished look. If we can have a broad, open lighting, it is easy to make quick exposures of the wiggling, tiny people. Whether as a result of the brief exposures necessary, or because too sharp a focus is not becoming to baby-faces, we have come to admire soft effects in the flesh-tones of children's portraits. To obtain this, we use a fairly open shutter, stopped down enough to give detail to the drapery.

Of babies in long clothes, the finished picture is sure to be — more clothes, less baby; but that is the mother's desire, for she invariably wants the pattern of the needlework clear, since that

is a part of the record. And babies' pictures must be more record than composition to satisfy our patrons. Maybe she wore that same needle-work herself when a baby! Her wishes are accomplished partly by the method of lighting and completed by proper development. With high, broad window-lightings, a regular diffusing-screen is useful. Set it up near the subject, out of range of the lens, and in such a position that it shuts off no light from the face, but will lower the light on the draperies, so that instead of



TWINS — CURLYHEAD AND SCOWLS

GRACE C. RUTTER

photographing chalky, you get satisfactory diffusion and detail without undertiming the flesh-tones.

"Twins" shows the results of not using one. This picture was a problem. In addition to the restlessness of the two babies, I was obliged to work in very cramped surroundings, and with the lack of the dainty, babylike effect, which was inevitable — they were just about to be graduated into short clothes, and had outgrown their pretty long dresses — altogether, my nerves were spun to a thread. I compromised finally on a kicked-out-of-focus drapery and "Curlyhead's" angelic expression, just as I saw that the other twin meant to squall again. Of course, you know that a baby can cry; but do not delude yourself that

forms the screen proper, and milled-head screws can be attached to raise or lower the contrivance as desired.

Alas, alas, that we can seldom choose our lights! The best choice needs to be carefully planned for, in home-portraiture. There are the low ceilings and small windows; and, perhaps, the



MARION

GRACE C. RUTTER

twins will not make more noise than two babies, singly. Had you passed the house when I was making this picture, you might have thought, with good reason, that it was a whole baby-farm and we were murdering them all. Any one skilful with tools can make a diffusing-screen for home-use from the illustrations in the photographer's supply-catalogs. A tripod of light-weight wood supports the gauze-covered framework which



REDHEAD

GRACE C. RUTTER

wall too near to be thrown out of focus. With small windows, a fairly efficient aid is made with a generous length of white cheese-cloth, durably hemmed, and a cord-loop in each corner. One end is caught over the window-shade hooks and the strip is stretched taut and the other end fastened to a tall clothes-horse, the top of a high piece of furniture, or even a door directly opposite the window. This increases the light by reflecting it down on the subject, but the lens must not be tilted the slightest degree upward or reflections may result where least wanted. Another procedure is to arrange the baby slightly side-view toward the lens, and with most of the long dress turned partly into the shadow. With a reflector, good results are produced without lengthening the exposure.

I have found few verandas suitable for posing.

If you can find one on the ell of a house that is shady at the right time of day, it may answer your purpose; but the least breeze causes your backgrounds and reflectors to wave defiance to your best efforts. You cannot do without the background, as either the porch-railing or the surrounding scenery or the weather-boards are



JUNIOR

GRACE C. RUTTER

present to obtrude and distract from the best technical work. "Marion" is an exception to the usual veranda-portrait. A large tree at the side-front diffused the strong light, and a thick vine in the rear, with the aid of the high-backed chair, shut off the scenery and prevented halation. No reflector was needed, and it was given a full exposure of a half-second with an ordinary plate. Pyro tank-development and printing on soft paper gave this pleasing picture of the amiable little queen. As to the reflector, I do not often bother to carry mine everywhere I am called to go. A sheet thrown over a clothes-horse or a high-backed chair, or draped from one piece of high furniture to another — if placed at the correct angle — serves the same purpose.

Little babies have such weak backs that a high-chair is about the only thing which will give

them the needed support. It should be covered with a dark couch-cover or fur-robe. For years, I have used a pair of dark green chenille-portières which have faded and outworn their original sightliness, but give just a pleasant degree of contrast to babies' dresses. A potted plant may often be used as a partial background to screen an unremovable piece of furniture or to serve as a sort of balance. It should not be in sharp focus.

"Junior" was so well-behaved that the one-second exposure, even on the fast plate which the rather dull light of his mother's parlor made necessary, was made without any trouble. A reflector lighted his shadow side, and two windows, the bright side. He was sitting in a low baby-chair placed on the seat of a kitchen-chair,



GURGLES

GRACE C. RUTTER

both covered by the fur-robe. Soft paper and pyro tank-development produced this print.

"Sweetness" was a young baby, large for her eight weeks' age, but still too weak of back to sit more erect. One-fifth second exposure was sufficient with the anastigmat lens, and she was placed near a large south window just inside the point where the sunlight struck the floor. Cramer Crown plate, pyro tank-development, Azo hard paper, brought out the excellent detail in the laces and the little jacket.



SWEETNESS

GRACE C. RUTTER

"Redhead" and "Gurgles" were taken under almost identical conditions of light, but slightly different from "Sweetness," and entirely different from the others. Both were so full of life that I feared a blurred image. So they were placed near a south window with bright sunlight outside and a sheet thrown over a chair and moved close to their shadow sides. A couch-cover conceals a bureau back of "Gurgles." It seemed to me that "Redhead" was moving every second — she was so happy with her two new teeth, which her mother insisted must show in the picture. The needlework details were obtained by the diluted developer, pyro, and a sixty-five-degree temperature, soft paper; and the absence of blurring was due to the one-half second exposure and a fast plate — in both pictures. Babies' pictures should be developed separately from other negatives, with greater dilution, usually one-third more water. There can be no set rule. Different plates, lens-speeds and various lighting-advantages create a wide range of strength and time of developing, for which only experience can prove a rule of guidance to permanent success.

Water-Views with Dual Motive

AN excellent example of the correct way to treat this motive is to be found in his river-views, the Norwegian painter, Frits Thaulow, never giving more of the landscape itself than a suggestion at the top of the picture, thus concentrating the attention on the beautiful swirling expanse of water below. The water itself tells all that is needful of the thing it reflects, and the attention is not distracted in the effort to see two things at once.—BIRGE HARRISON.

This is the source of the panel-shaped photographs of river- and pond-views, in which the water forms an elongated foreground, the shore or water-craft occupying the top of the picture-space. This style of pictorial composition was quickly adopted, and utilized with admirable results, by certain photo-pictorialists, notably, W. H. Porterfield.—[EDITOR.]



THE soul that becomes discouraged in the presence of real greatness will never become thoroughly artistic.—*Felix Mendelssohn-Bartholdy.*



EDITORIAL



Mark the Extortionists

THEY should be marked men — purveyors who, without just cause, charge extortionate prices for commodities. Who; the manufacturers of photo-supplies? No; the dealers in coal, food-stuffs, clothing, shoes, stationery, paper and other necessities. A reasonable advance in ante-bellum prices on account of shortage of raw materials and augmented cost of labor is justifiable; it is expected. But when it comes to fixing prices that greatly exceed the natural increase in cost of production — prices that are oppressive and arbitrary, and against which practice there is no redress — the extortionists should be made to feel the resentment of the people. There should be a day of reckoning for them. Until that gratifying opportunity arrives, the extortionists should be marked men. Take, for instance, a well-known form of order-book. Until recently, it sold for two dollars in dozen-lots. Now the price is four dollars a dozen — an increase of two hundred percent! The paper composing these little books is of a cheap grade — as pencil is used to produce a carbon-copy of each order — each sheet having a heading printed in bluish ink, and the cover being of thin flexible cardboard. In the circumstances, an advance of twenty-five percent would seem to have been ample to cover an increase in the price of production. The maker's motto evidently is, "Do 'em while the doing is good." Parallel cases are numerous. Among the few notable exceptions is the photographic industry. Here a necessary but moderate advance in prices was made under obviously warrantable conditions — several years ago — when paper-stock and certain chemicals were impossible to get from Europe; but the prices of other necessities remain virtually unchanged.

No Efficiency Without Interest

THE art of salesmanship is usually interpreted to be the ability to sell a customer what he does not want; but viewed sanely, salesmanship consists in supplying the customer what he wants, and to gain his confidence and good will. But this is not all. A prominent picture-dealer of the Hub has observed that his salesmen perform their duties in a merely perfunctory manner. The initiative in the effort to find the picture wanted generally comes from the cus-

tomers, with no eager assistance of the salesman, whose heart and soul are not in his work. The proprietor of this store does not feel that he is getting an adequate return for the amount paid out for salaries, and, in order to try to improve the situation, has hit upon the following plan:

He has prepared a series of questions which each salesman is expected to answer in writing, as fully or as briefly as he pleases, and he who gives the best answer is to receive a prize; but this the clerks do not know. The questions are: I. "Why do people buy pictures?" II. "Why do people buy frames?" In all probability, the next question to be answered by the salesmen will be: "Why do you work for me, and not for a hardware-dealer, a druggist or a haberdasher?" The resulting answer, no doubt, will determine either the retention or dismissal of the salesmen. In this way, the art-dealer hopes to obtain assistants that will show a sympathetic interest towards a customer, and a spontaneous desire to cooperate with him, sell him more goods and prove to his employer that he is in love with his work.

Now, it is a fact, that there are many salesmen in photo-supply stores who take neither pride nor interest in their work, doing absolutely nothing beyond what they have been asked to do, and, naturally, making no advance towards greater personal efficiency. Some day the proprietor of the photo-supply store, too, may adopt the art-dealer's elimination-test. "Why do people buy cameras, dryplates, films and other photo accessories?" is a searching question to put to most photo-salesmen. No doubt, some would answer intelligently; but others would reply, "To make pictures" — a fact that is self-evident. The alert photo-salesman seeks the reason back of the desire to buy a camera. He is interested enough to try to ascertain whether it is the arrival of a new baby, the lure of the hills or the thrill of the surging sea that has aroused the wish to reproduce anticipated scenes of joy. When he has obtained the necessary information, the efficient photo-salesman tries to sell an equipment that is best adapted to the needs of the purchaser. Of course, he must combine judgment with tact, keeping in mind his employer's interests, and making the customer feel that he is receiving the best possible service. A photo-supply store that is so fortunate as to have such a salesman need have no fear of the loss of patronage.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

Awards — Home-Portraits Competition

Closed April 30, 1917

First Prize: T. W. Kilmer.

Second Prize: Bradley Studio.

Third Prize: J. H. Field.

Honorable Mention: Mabel Heist Bickle, C. C. Boslaw, A. D. Brittingham, E. J. Brown, J. Burns, J. E. Bush, H. R. Decker, Albert C. Ferry, Jared Gardner, E. G. Gunning, Roger P. Jordon, George Krause, A. B. Largett, F. L. Lutz, E. Marty, Holmes I. Mette, Chas. H. Partington, George Pennock, J. H. Saunders, A. S. Workman.

Special commendation is due the following workers for meritorious prints: W. B. Baxter, Elmer Beard, Alice B. Caldwell, O. C. Dean, Louis A. Dyar, Addie M. Harthan, W. R. Houchen, Dr. M. Houston, A. L. Mason, G. A. Perley, D. Vincent Smith, Kenneth D. Smith, W. Stelcik, Chas. Strube.

Subjects for Competition — 1917

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Miscellaneous." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.



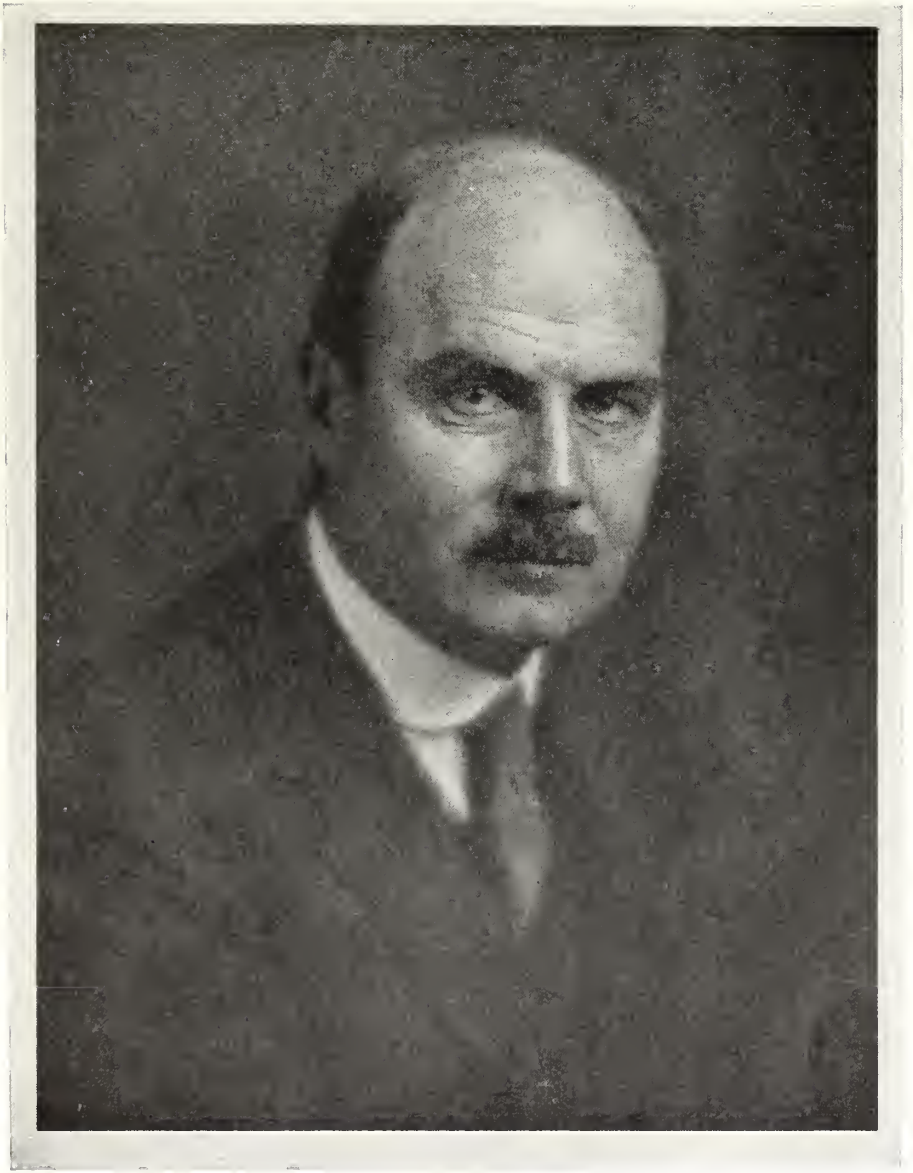
Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.



PRaise from relatives and friends of the amateur's pictorial efforts is often a hindrance rather than a help. When commendation is based upon sound practical knowledge, and is entirely unprejudiced, it should be doubly welcome; and of the critic it may aptly be said: "Approbation from Sir Hubert is praise, indeed."

W. A. F.



PORTRAIT OF DR. H.
T. W. KHLMER
FIRST PRIZE — HOME-PORTRAITS

Miscellaneous — Advanced Competition

Closes August 31, 1917

This month we come to the third of our Quarterly Miscellaneous Competitions which give free reign with regard to subject and treatment. Some camerists work to better advantage when a definite subject is announced, and others excel when they are unfettered by the limitation of a stated method of procedure. These competitions have become very popular recently — due, in part, to this very sense of freedom. In many cases, a true and more beautiful understanding of the photographer's love of nature, humanity and spirituality is given by the pictures he sends to the miscellaneous competitions. In photography, as in other lines of endeavor, we turn instinctively to those subjects which we love the most, and, in so doing, we reveal unconsciously a bit of our true character. The frontispiece "Silent Homage," by Mrs. Fannie T. Cassidy, in the April, 1917, issue, is a case in point. Back of that picture lay a beautiful understanding of the relation between nature and Deity. Again, in "The Breaker," by Harold A. Taylor, page 290 of the June, 1917, issue, appeared a striking picture of a huge breaker thundering down upon the shore in a mass of foam. Only a true knowledge and love of the sea made this superb marine a possibility. And so, without end, might be cited similar cases to substantiate the statement that in these miscellaneous competitions all have the opportunity to express in pictorial form their highest and truest conception of the beautiful.

It often happens that pictures that were made too late to be entered in other competitions are eligible to the present one. Such pictures should be entered now unless they are particularly well adapted to a competition announced for a later date. Possibly it is some portrait that would make an excellent genre; perhaps it is a landscape that has figures which are so arranged as to eliminate it from the "figures in landscape" class; or again, it might be a print that does not fall readily among the subjects announced in recent or future competitions. At all events, this is an excellent opportunity to give one's collection of pictures a thorough overhauling.

Though landscapes are always of artistic value and interest, it should not be inferred that home-portrait, genre, still-life, marine, camp, architectural, nature, speed and other pictures are unwelcome. The stirring times in which we live abound in possibilities. The intelligent and well-equipped camerist need not go far to obtain real pictures of permanent value to himself and to others. However, "record" photographs, as such, stand but small chance in PHOTO-ERA contests. That a picture is an excellent technical photograph of a house does not qualify it for the miscellaneous competition. There must be something or some one associated with the house to give it special interest, or it must have a message to convey which is inspiring or beautiful. Likewise, a picture of a group — interesting to those who know its members — is valueless unless there are historical or otherwise important associations connected with it. Try to decide whether or not the photograph you intend to send is of more than family or local interest. Remember that there is a great world beyond your horizon that cares nothing for you unless you touch a sympathetic chord — something in common with what we can all enjoy.

One object should predominate over all others in any picture. Emphasis may be given the center of interest, either by position or by contrast of light and dark. Make your picture convey one definite thought. On page 285 of June PHOTO-ERA, 1917, is a striking illustration of the three-pictures-in-one type of photo-

graph which lacks emphasis because of "pictorial redundancy." The lover of the beautiful in nature is drawn easily into the attempt to include all he possibly can on one plate. However, he should remember that the selection of the most beautiful part of the scene — and that only — will give greater pleasure to him and be of greater interest to others.

The choice of a proper printing-medium is a large factor in the success of your effort. It requires not a little artistic feeling and a well-developed sense of the fitness of things to choose the best means to interpret to the public the beautiful conception that was in one's own mind when the exposure was made. Because a certain grade and surface of paper has given pleasing results with some plates is no indication that the same paper is suitable for any and all subjects. The flower-study that depends for its beauty on delicacy and fineness of detail and texture is best rendered by a smooth-surfaced paper, possibly one with a slight gloss; and not infrequently a green tone is pleasing, especially when the blossoms are white. However, such treatment would be the opposite of what should be given to studies where breadth and mass are the predominant characteristics. For such studies a rough-surfaced paper is preferable, and the color should be chosen carefully. For snow-scenes a gray platinum is appropriate, whereas for sunsets or autumn-subjects the warmer sepia-tones are preferable.

This matter of the best presentation is one that demands your best critical judgment as well as your best technical ability. A print may be faultless technically and yet fail to make the right impression on the beholder. On the other hand, a print which in reality is faulty on the technical side may be full of poetry and mystery — gaining and holding the interest which the merely literal and technical could never arouse for a moment.

True art comes first from the heart and then from the mind. Technical knowledge of composition is invaluable as a *means* to express that which is beautiful, true and spiritual; but remember that of itself the technical is cold and lifeless. Because you may be a professional photographer in no way signifies that your pictures are works of art. Your pictures may be perfect technically; but if they fail to inspire, please or otherwise move the observer, they have not and you have not succeeded in true artistic photography. Emphasis is placed purposely on this point because of the many who fail to realize its truth. Conversely, it does not follow that because you are not a professional photographer you are incapable to produce winning pictures. Look to the inspiration of your effort. If it be strong, fine, true, beautiful and pure, you cannot fail. Such technical mistakes as you may make are lost sight of in the appreciation of the appeal that you have tried to make with the knowledge and equipment at your disposal.

It may be seen that this Miscellaneous Competition is not merely an opportunity to get rid of such prints as may be lying about the house. Whatever you send should have a thought back of it. Above all, remember that your picture represents you, and that it will make its appeal in proportion to the time, thought and skill you put into the making of it.

A. H. BEARDSLEY.

An At-Home Portrait Note

DOUBTLESS many workers are at present attempting home-portrait work, and when dealing with male-subjects there is often considerable difficulty in placing the hands in a pleasing position. The present writer, when dealing with male-sitters, has found that if a



THE FIRST-BORN

BRADLEY STUDIO

cigarette is lightly held, from force of habit the hands at once become graceful and characteristic. A lady is more easily dealt with in this matter; a few flowers, a vase, or some needlework occupy the hands most gracefully; and in the case of a child, a picture-book or toy fulfils the same purpose. Many portraits that one sees are often spoilt by some defect in the pose of the hands, and often they are omitted to avoid the difficulty; but if the points emphasized above are noted and put into practice, the difficulty will be found fairly easy of solution.—*Amateur Photographer*.

Figure-Composition in Landscape

PROSPECTIVE pictorialists desirous to improve their picture-making abilities with reference to a standard work on figure-composition are advised to consult the volume on this subject by Sadakichi Hartmann (Sidney Allen). This is a *de luxe* publication, 7½ x 10½ inches in size, beautifully printed on heavy coated paper, gold top and sides, and illustrated with over 150 halftones (from celebrated paintings and appropriate photo-

graphs by well-known pictorialists) and diagrams. This superb volume is from the pen of one of the foremost living art-critics, and is designed to guide amateur photographers to successful efforts in composition of landscapes with and without figures. The work was published, originally, at \$3.00, but Photo-Era procured 150 volumes at a special price, and will sell them to its readers at \$1.50 a copy, sent by express, collect, or by parcel-post (consignee's risk), postage according to zone. Each copy, in a neat cardboard box, ready for shipment, weighs 33 ounces.

A Note on the Paget Color-Process

As is well known, in order to achieve success in making negatives for the Paget color process it is most important that the taking-screen and panchromatic negative-plate should be in perfect contact. When the plateholder is fitted with springs at the back, this is quite an easy matter to ensure, but when they are not so fitted perfect contact becomes a matter of some difficulty. The writer has found that it is a good plan to



HOME-PORTRAIT

J. H. FIELD

bind the "taking-screen" and negative-plate together at the four corners with scraps of lantern-slide binding-strips about a quarter of an inch wide. This also helps in facilitating accurate registration with the viewing-screen, and avoiding subsequently overlapping edges of the transparency plate and screen due to the absence of exact parallax. It should be noted that the front edge of the scrap of binding-strip, i.e., that over the taking-screen, should not lap more than say one sixteenth of an inch, or part of the picture will be cut off. After exposure it is quite an easy matter to separate the two without damage to either by simply cutting the binding-strip through at the edges of the plates with a sharp knife.—*Amateur Photographer.*

Ink for Glass, Porcelain, Etc.

INK for writing names on glass bottles, porcelain dishes, tins, etc., may be made by dissolving 60 grains of powdered copal in 1 ounce of oil of lavender made warm, and then mixing the solution, by means of a palette-knife on a stone, with 6 grains of lampblack and 2 grains of indigo; if other colors are wanted, vermillion, ocher, etc., may be used. The mixture is applied with a fine camel-hair brush. To make the writing stand out prominently on glass it is advisable first to paint a shield or tablet on the glass, using white bath enamel for the purpose.

A mixture particularly suitable for lantern slides may be made by dissolving 1 dram of shellac in $\frac{1}{2}$ ounce of methylated spirit; then dissolve $\frac{1}{2}$ dram of borax in $\frac{1}{2}$ ounce of water. The solutions should be mixed together very slowly, and if a precipitate forms the mixture should be heated until clear. Enough aniline dye of a suitable color—methylene blue is generally used—should be added to color the mixture. This dries quickly and is permanent.—*Professional Photographer.*

Pyro-Stains

To remove these objectionable stains from the fingers, first make a strong solution of chlorinated lime and dip the pyro-stained fingers in this. Now rub the stains with a large crystal of citric acid, and apply the lime-solution and acid alternately until the stain has completely vanished. Then rinse *thoroughly* in water. To remove pyro stains from a negative, immerse in a bath prepared as follows:

Iron sulphate	3 ounces
Alum	1 ounce
Citric acid	1 ounce
Water	20 ounces

After this it should be well washed. A good practice would be to immerse all negatives in the above bath as soon as they have been fixed.—*Amateur Photographer.*



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY



Drying a Print Quickly

AN interesting method of drying a bromide or gas-light print very quickly was that which Mr. Gear demonstrated recently at a meeting of the Royal Photographic Society, London. After the necessary fixing and washing, the print is placed in methylated spirit, and as soon as it has been thoroughly saturated, the print is suspended by some metallic holder and ignited. The moment the spirit-flame is extinguished, the print will be found to be entirely dry and uninjured. Surprising as it may seem, Mr. Gear pronounced the process as perfectly reliable, and he never had a print destroyed or injured in any way by it. In these days, when sometimes it is of great importance to turn out large numbers of finished prints and enlargements, at high speed, this fire-method should prove extremely useful.

The Speed of Lenses

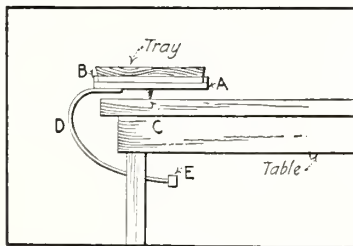
F/4.5 is 1.137 times faster than F/ 4.8
F/4.5 is 1.234 times faster than F/ 5.0
F/4.5 is 1.548 times faster than F/ 5.6
F/4.5 is 1.960 times faster than F/ 6.3
F/4.5 is 2.777 times faster than F/ 7.5
F/4.8 is 1.085 times faster than F/ 5.0
F/4.8 is 1.361 times faster than F/ 5.6
F/4.8 is 1.723 times faster than F/ 6.3
F/4.8 is 2.441 times faster than F/ 7.5
F/5.0 is 1.587 times faster than F/ 6.3
F/5.0 is 2.250 times faster than F/ 7.5
F/6.3 is 1.417 times faster than F/ 7.5
F/6.3 is 1.613 times faster than F/ 8.0
F/7.5 is 2.230 times faster than F/11.2

By carefully working this out, you will be able to find the speed of the lens which you are using, and how the speed of one compares with another. Better keep this; it will be worth something to you some time.

From ANSCO Co.

Self-Rocking Developing-Tray

WHEN it is necessary to develop a great number of plates, it becomes tiresome to rock the tray in which the development takes place. A self-rocking tray may easily be arranged in the following manner:



Cut a piece of thin wood large enough to fit the tray nicely, as shown at A in the illustration. Around the edges nail small strips of wood, to prevent the tray from slipping off A. A wedge of wood, C, as long as the tray is wide, and 1 inch wide, is nailed to the bottom of the wood piece, A. This is the pivot on which the tray rocks.

A strip of soft iron, 2 feet long and $\frac{3}{4}$ inch wide, has

one end fastened to the under side of the tray-support, and is bent in the shape shown. A weight fastened to the lower end of the strip serves to balance the whole arrangement.

The tray containing the developing-solution is placed on A, and after the plate is immersed, the tray can be started rocking by causing the weight, E, to swing. The rocking motion will continue for some time, since there is virtually no friction at the pivot!

T. W. BENSON.

Making Wood Waterproof

WHEN a small piece of woodwork for some repair or addition to our photographic kit is made, it is often necessary to make it waterproof. A very good way to do this cheaply and simply is to obtain a pennyworth of orange shellac from a chemist and dissolve this in a wide-mouthed bottle, with methylated spirit, until it is of the consistency of thick cream. Those who follow the flat-iron method of dry-mounting will already have this in hand. The wood to be treated is given a coat of the solution and allowed to dry till quite hard; it is then given a second coat, and so on with a third or a fourth, if thought necessary, and it will be found to have a smooth and water-resisting surface.

Amateur Photographer.

A Note on Printing-Frames

AN excellent and timely hint is given by R. M. F., in *The Amateur Photographer*, on printing-frames. That good contact between the negative and the printing-paper is essential if the finest prints are to be obtained is a point too often lost sight of by the majority of workers at the present time. The old-time worker gave as much care to the "pads" for the back of the printing-frame as he did to the condition of the frame itself; but to-day very few photographers trouble about them, and the back of the printing-frame itself is allowed to rest directly upon the back of the sensitive printing-paper. The main purpose of the pad, of course, is to keep out damp, and for this reason they are still used in platinotype-printing; but besides this, which even with the other processes is still most important, perfect contact with the negative is assured, and this is of especial importance when much-used printing-frames are employed, when it will be most likely found that the back springs have lost much of their original power. For ordinary purposes the card-packings enclosed in the packets of printing-paper will be found quite good enough if a sheet of plain blotting-paper is placed between them and the back of the printing-paper, or, failing these, two or three sheets of blotting-paper the same size as the frame may be employed, and so serve a double purpose, viz., the exclusion of damp, and ensuring perfect contact between printing-paper and the negative. Only recently we heard an amateur complaining of the poor definition of his prints, though the negatives were perfectly sharp. This was eventually traced to the use of a printing-frame with worn springs. Two or three sheets of blotting-paper were inserted as indicated above, and the trouble vanished. The foregoing are points frequently overlooked, and may be taken as examples of things little in themselves that are well worth attention.



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$5.00.

Second Prize: Value \$2.50.

Third Prize: Value \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. ***Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

6. ***Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.***

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of ***stiff*** corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

Awards — Beginners' Contest

Closed April 30, 1917

First Prize: Alvah G. Clark.

Second Prize: Foster Lardner.

Third Prize: Geo. W. French.

Honorable Mention: James Allan, C. J. Brewster, Dr. B. Frank Gray, F. N. Inouye, Henry L. Osborn, J. H. Saunders, A. S. Workman.

Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

When Nature Is Wrong

WERE you ever invited to be the guest of a picnic-party because you were a camerist and, if called upon, willing to make a picture of the group? Did you, on such an occasion, snap the party sitting on the beach, with the sun streaming into the faces of the discomfited picnickers? And what was the result? You do not like to discuss the matter, because the picture pleased no one. How could it be otherwise, with the blazing sun distorting the features of each member of the group, so that recognition was virtually impossible? No wonder you were not invited again to join that festive party. Please remember that the shade is much preferable for an outdoor group-portrait; even photography against the source of light is better.—W. A. F.



THE LIFE-CLASS

ALVAH G. CLARK

FIRST PRIZE — BEGINNERS' CONTEST

The Vacation-Camera

At this season of the year the vacation-camera comes into its own. By that is meant the photographic equipment which is purchased hurriedly on the way to boat or train. Many camerists plan their vacation carefully in all respects with the exception of their picture-making paraphernalia, which is usually forgotten until the time of departure — then there is a rush to the photo-dealer's for any kind of a camera within the stated price. Needless to say, the dealer has no opportunity to serve his customer efficiently, and neither is the purchaser likely to know much about the camera. The result is shown in the thousands of vacation-pictures that amount to little artistically or otherwise.

The vacation-snapshooter is somewhat of a non-descript. To him, photography is merely the means whereby he proves to those at home that he has been here or there and that he has been with this or that person. Though he may make beautiful pictures, his interest often ceases the moment he returns to his home. Since the name of vacation-snapshooters is legion, a few suggestions concerning the vacation-camera may be of value.

Though you may know something about cameras and lenses, do not get an equipment that will require too much time to master. A fixed-focus type of camera is almost sure to get results in the hands of the tyro. 'T were better to use such a camera and bring home

pictures than to purchase one that evoked admiration but — in inexperienced hands — produced unsatisfactory results. You must creep before you can walk, photographically. Nothing is more disheartening than to invest heavily in a fine equipment and then have your neighbor surpass your best efforts with his two-dollar Brownie. It is not that the Brownie is a better camera, it is, rather, that your neighbor knows how to use his equipment but you know little or nothing about yours. This is a vital point to remember.

Vacation-days are not particularly well suited to systematic photography, except to the regular devotees. Most vacationists have left dull care behind, and are in no mood to carry tripods, calculate exposures or to do their own finishing. Hence, a camera that is fixed-focus, or virtually so, that requires little adjustment with regard to lens-stops and shutter-speeds, is eminently suited to the usual hit-or-miss style of vacation-photography. It must not be inferred that my reference to vacation-photography is intended to cast any reflection on the vacation-camerist's sincere desire to obtain good pictures; nevertheless, the fact remains that really serious photography cannot and does not enter into the usual allotted two weeks' period of recreation. At best, most vacation-pictures may be classified as "record-photographs," and as such they often answer admirably. Moreover, sentiment cannot be ignored.

If you are entirely ignorant of cameras, ask the

photo-salesman to set the lens-stop, shutter-speed and focusing-pointer so as to meet the average requirements for snapshots out-of-doors, then — let all adjustments alone. Pay particular attention to the correct method to insert the film. In Brownie cameras be sure that the film passes under the cardboard flap, otherwise you will obtain pictures resembling ping-pong or button “tin-types” and the rest of the negative will be blank. Whatever camera you purchase, treasure the direction-book, for it will be your guide in time of trouble. Before you leave the helpful photo-salesman, make sure that you know how to load your camera, how to find the image in the view-finder and, most important, what to let alone until you know more about cameras than you do at the time of purchase.

Another vitally important thing to remember is the number and size of the correct film for your camera. For example, there are three $3\frac{1}{2} \times 4\frac{1}{4}$ roll-films on the market. One for the popular No. 3 Kodak, another for the No. 3 Brownie and still another for the old Cartridge Kodak. If you hurry into a photo-dealer's store and ask for a $3\frac{1}{2} \times 4\frac{1}{4}$ film, how is he to know which film to give you unless you give him the camera or mention its name correctly. A $3\frac{1}{2} \times 4\frac{1}{4}$ sample print is of no use, as all three finished prints are the same size; the difference being in the length of the spools. There are other sizes of film that produce the same size of finished picture but require different spools to fit the various makes of cameras. Make sure of the size of the film and thereby avoid disappointment or delay.

As already pointed out, the vacation-snapshooter is not and should not be expected to make salon-pictures. At the same time, he should try to do his best even though he is one of a group of friends who consider him a “camera-bug.” In the landscapes and marines he attempts to reproduce let him bear in mind that a moment's thought will mark the difference between success and failure. Although he may relegate his camera to the top shelf at the end of the two week' vacation, he should make his short photographic experience one to remember with pleasure and satisfaction.

A. H. BEARDSLEY.

A Strange Illusion

BEGINNERS often make the mistake of unconsciously assuming that in some way the view-finder is connected with the camera-lens. This is strikingly illustrated by the remark, “Everything was clear and sharp in the finder when I snapped the picture.” This illusion is particularly common to beginners who are making their first indoor pictures. Alas, the brilliant scene in the finder is not reproduced on the film! Many times the finder will display an attractive scene that fails to make even the slightest impression on the sensitive film or plate. Modern view-finders, range-finders and other devices are excellent in the hands of the experienced amateur; but for the beginner there is as yet nothing so serviceable and likewise so educational as the old-fashioned ground-glass on which the picture is projected by the camera-lens *exactly* as it will appear on the plate. Even on a cloudy day the modern brilliant view-finder reproduces a scene with startling sharpness and illumination, often to the undoing of the unwary beginner unless he estimates the exposure correctly and acts accordingly.

It is this very discrepancy between the image in the view-finder and the resulting picture on the film that has been responsible for the popularity of reflecting-cameras. Though these cameras are more complicated and bulky, nevertheless the percentage of failures due to underexposure and to incorrect focusing is reduced to a minimum. Another striking advantage one has with

the reflecting-camera is that the image appears right side up. However, right side up or wrong side up, the image as projected by the camera-lens on the ground-glass is the surest method by which to focus and to calculate correct exposure that has been devised.

Needless to say, the intelligent beginner will soon master the correct manipulation of the view-finder and will obtain excellent results. However, he must disillusion his mind of the fallacy that whatever appears in the view-finder will appear with equal brilliancy and sharpness on the film. The best and quickest step is to experiment with a roll of film, and to compare the image in the view-finder with the result on the film. In this way the relationship between the view-finder and the camera-lens will be clearly understood at the outset.

A. H. BEARDSLEY.

Removing Dust from the Bellows of a V. P. Camera

It happens very frequently that dust collects inside the bellows of a small camera, and it is next to impossible to remove it by any of the ordinary methods applicable to larger apparatus. Of course, if ordinary care is taken, no large particles of dust should collect in the camera, provided that it is enclosed in a well-fitting case; but if the camera is of the vest-pocket type, and is made a constant companion, this does happen, of course, from time to time. One of the best ways to remove any dust from the bellows of a camera too small for the insertion of the hand is by means of a powerful bicycle-pump, or, better still, a football-inflator, as this is usually the more powerful. The camera should be opened to its fullest extent, and held by an assistant, with the lens upward; then two or three sharp inflations are given with the pump full into the bellows at the open end of the camera, to dislodge any foreign matter therein. The reason for holding the instrument as mentioned is that dust may fall away from and not into the lens, as would otherwise be the case. The above, though simple, will be found most effective in actual use.—*Amateur Photographer*.

How To Measure the View-Angle of a Lens

WILFRED A. FRENCH, Editor PHOTO-ERA.

Dear Sir:

I have discovered a very easy and simple way to measure the view-angle of a lens. I do not think that any of the known methods for this purpose are as accurate as this. Not having seen it mentioned anywhere, I am of the opinion that it is new, and I cheerfully offer it for the benefit of the readers of PHOTO-ERA. Here it is:

Double the focal length of the lens and then find the circle of the diameter. Next, divide 360 by the number of inches contained in this circle, which will give a certain number of degrees to every inch. Now, by multiplying the number of degrees by the diagonal of the plate, one can tell exactly the number of degrees comprised within the angle of his lens, and within a minute's time.

Example: A 3A Kodak Special has a lens of $6\frac{7}{8}$ -inch focal length, which, doubled, gives $13\frac{3}{4}$ inches. The circle of this diameter ($13\frac{3}{4}$ inches) is $43\frac{3}{4}$ inches. Dividing 360 by $43\frac{3}{4}$ inches, we have $8\frac{1}{12}$ degrees to every inch. By multiplying $8\frac{1}{12}$ by the diagonal of the plate (6.5 inches), we get $54.14\frac{1}{2}$ degrees, or the horizontal way ($8\frac{1}{12} \times 5\frac{1}{2}$) gives us $45.81\frac{1}{2}$ degrees, and the vertical way ($8\frac{1}{12} \times 3\frac{1}{2}$) $27.07\frac{1}{2}$ degrees.

Yours faithfully,

SAMUEL RABINOWITZ.

Brooklyn, N. Y., May 9, 1917.



SYLVIA

FOSTER LARDNER

SECOND PRIZE — BEGINNERS' CONTEST

Developing Large Prints

DEVELOPING a very big enlargement usually presents a formidable problem, and the resources of the photographer are taxed to their utmost to cope with the operation. A very simple way is to obtain a large piece of wood, larger than the print is to be, or if this is too large it can be built up of one or two smaller pieces. To the edges of this are fastened small strips of wood, so that a shallow tray is formed. The whole of this is then rendered waterproof, both top and bottom, by means of several coats of shellac-varnish. For developing, a large basin and a big lump of cotton-wool are required. The enlargement is laid in the dish, and the bowl filled with clean water; the print is well saturated with the water, using the wool as a mop, until it is quite limp. The water is next thrown away, and the basin filled with developer, and the print developed in the same way, with the cotton-wool. It is then washed, when development is complete, and fixed, all by the same method.—*Amateur Photographer*.

A Suggestion to Photographers

IN this day of ever-increasing opportunity, the camera-man is seeking, and finding, his share of the bright ideas and little money-making schemes that are due him.

To those who are successfully selling pictures, I am making this suggestion; and also, to those who not only "take to make," but who enjoy picture-making for the fun there is in it.

Who has not often thought, while witnessing some photoplay, what a fine portrait or landscape some particular part of the film would make as it unwinds before you? For instance, there is a glimpse of dark, threatening clouds, a high cliff and trees, and, let us say, a woman standing up there on the sky-line. You are thrilled with the impressiveness of it. But it gives way to other scenes, and you see it no more. But what a fine picture it would make! Yes, indeed! And with a pencil and pad in your hand you can jot down a few

such instances when you see a momentary picture of unusual impressiveness, and later, at your leisure, make one that is equally as striking. But in jotting down the points of the original picture, make a note of the important factors of the picture. Note, let us say, that the wind is blowing from the side; and that the figure's clothes more readily disclose the presence of the wind; that the figure stands out in sharp contrast to the background; that the picture is well balanced, and so on.

This is but one instance; but a number of equally striking scenes or poses may be found in almost any photoplay, and if the photographer is in the business of making pictures to sell, he can surely find a wealth of good ideas for novel and valuable pictures in the motion-picture house.

DALE R. VAN HORN.

Is the Filter Flat?

WHEN using a light filter for high-class work it is important that the filter should be quite flat. Since slight deviations from strict accuracy are not discernible by the eye, the following method of testing a filter, recommended by Mr. Ferguson at the Royal Photographic Society recently, may be of interest. Assuming that an ordinary day-telescope is available, focus it on some distant object, and when the image is quite distinct hold the filter before the object glass. If the filter is not perfectly flat the image will at once become more or less blurred.—*Amateur Photographer*.

Free Trial-Subscriptions

PARTICIPANTS in either PHOTO-ERA monthly competition, who receive Honorable Mention, may have the privilege to give to a friend—not a reader of the magazine—a free trial-subscription of three months. This plan is also to be retroactive and to include entrants in competitions beginning with March, 1917.

If those who are interested in this proposition will promptly notify the Publisher, their wishes shall be complied with immediately.



ANSWERS TO QUERIES



Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.

A. W. I.—The uneven tone in your sepia prints is possibly due not to uneven toning but to improper fixing. If prints lie together in the fixing-bath, and are not properly separated and thoroughly fixed, the uneven action will not show up until the prints are in the toning-bath, and then irregularities of tone may occur.

I. C. V.—The cause of blistering is very apt to be old or weak fixing-bath—though too abrupt changes in the temperature of solutions may also be responsible. When the blisters are only slight, it is usually possible to rub them down into contact again when the print is nearly dry. This should be done by covering the print with a piece of smooth paper and rubbing with the finger-tip.

L. W. B.—The mottled condition of the sky in your plates is probably due to failure to rock the tray sufficiently during development. When this is not done the solution acts unevenly, and such a condition as you describe is the result.

B. F. B.—There is hardly a better surface on which to trim prints than the film-side of an old glass-negative. It does not dull the knife as quickly as the plain glass, yet it gives a smooth, firm resistance. A sharp knife, a transparent square and an old negative make an excellent substitute for a more elaborate trimming-board.

D. M. D.—It is true that extreme wide-angle lenses seem to distort the image. However, this is in reality not true, for a wide-angle picture held at the same distance from the eye that the plate was from the lens when the view was taken will look correct in perspective. Since it is not pleasant to view a print at only four or five inches from one's nose, it is wiser to select a lens of a more reasonable focal length.

J. W. F.—It is entirely possible to make animals take their own pictures. One method is to secure the camera firmly and focus sharply on some definite spot—as the base of a tree. When everything is in readiness, fasten a piece of meat or other bait to a strong cord and place it where you wish the animal to be. By means of screw-eyes or other device the string can be carried to the camera and so arranged that a pull on the string will release the shutter.

C. M. B.—Frilling of films is exceedingly unusual as a rule, except in the case of a few brands which are quite thin. Most of our American films are backed with an unsensitized coating, which does much to prevent frilling and curling. The use of a fresh acid-alum fixing-bath ought to prevent frilling in the wash-water. If not, a hardener, such as formalin, may be employed at any stage of the work, even after development and previous to fixing, if that seems necessary. The solution should contain 1 ounce of formalin to 20 ounces of water, in which the film should be immersed 15 minutes. Be sure that the solution is distinctly alkaline, as neutral and alkaline solutions have very little hardening-effect. Of course, you doubtless realize that a chrome-alum fixing-bath has greater hardening-properties than one containing ordinary

alum. Probably, also, you know of the various hypo-eliminators by means of which long washing in warm water may be avoided. Of them all, potassium permanganate is probably best.

W. J. W.—Ferricyanide reducer usually causes stains on prints, and is generally thought unsuitable for this reason. If it must be used, it should be very dilute and not allowed to get upon the paper itself, but should be applied with a brush to the film-side of the print. "The British Journal of Photography Almanac, 1917," gives a cyanide reducer for prints on page 438, but points out that the solution is very poisonous. The formula follows:

Iodine (10 percent sol. in potass. iodide sol.)	..... 30 minims	6 c.c.s.
Potass. cyanide (10 percent sol. in water)	..... 5 minims	1 c.c.s.
Water	..... 1 ounce	100 c.c.s.

A. C. O.—The lens should always be parallel to the film or plate. A camera-front that is not tight is apt to be responsible for a greater or lesser amount of distortion. Before purchasing a camera be sure to examine carefully that portion of it which holds lens and shutter. If it leans forward or backward, and the right and left sides move easily, so that one part of the lens is nearer to the film than the other—do not accept the camera. A rigid front is essential to success, and particularly so when using anastigmat lenses.

W. C. K.—Most roll-film and film-packs are warranted against deterioration from eight to twelve months. The expiration-date is stamped plainly on every box, so that with due attention there is little danger that you may receive old film. If the film is to be used immediately it makes little difference, providing the expiration-date has not been passed.

G. B. H.—Although the regular film-pack developer ought to be most efficient, another good one is the following, a 20-minute solution at 65 degrees. Dissolve the chemicals in the order named in half the quantity of lukewarm water, and then add cold water to the full amount.

Water	..... 46 ounces
Metol	..... 4 grains
Hydroquinone	..... 15½ grains
Sodium sulphite, anhydrous	..... 186 grains
Sodium carbonate, anhydrous	..... 100 grains
Oxalic acid	..... 3 grains
Pyro	..... 19½ grains
Potassium bromide 10% sol.	..... 22 drops

This is an excellent Ansco film formula. Should the resulting negatives prove too thin for your purpose, increase the time to 25 or 30 minutes.

J. K. O.—Parabolic reflectors are now used extensively in photography. They may be roughly described as being mirrors or reflectors ground or bent to a parabolic curve—a parabola being the section of a cone cut parallel to its slant side. If an illuminant is placed in the focus of such mirrors or reflectors, the reflected rays are parallel, which is only approximately the case with a spherical mirror. Parabolic mirrors are used in photomicrography and for various purposes where parallel rays are necessary. White reflectors of parabolic or paraboloid curve are used to obtain even illumination of the negative in enlarging by artificial light when a condenser is not employed. In process work, parabolic reflectors are used on arc-lamps, but not so generally since the "enclosed" type of arc-lamp has come into use, a semi-parabolic shade-reflector being used instead. Most electric or gas enlarging-outfits are equipped now with parabolic reflectors, and their efficiency is well known.



PRINT-CRITICISM



Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.

A. A. K.—You have a very pleasing subject in your portrait-study, and the pose and lighting are excellent. In fact, there is only one jarring note in the picture, or rather two—the eyes. When the head is turned in one direction and the eyes in another, it gives a sly and unpleasant sort of expression far from attractive.

R. B. P.—Your picture of the old farmhouse lacks perspective because of its being taken from a point too close to the house itself. It looks bare, and too nearly fills the picture-space. The branches of a tree cutting

if turned toward the light somewhat, will catch enough light to relieve such Stygian blackness.

T. W. N.—A pleasing little portrait-group overwhelmed by too much surrounding scenery, which detracts from the main interest. The figures are too low down in the space. Trim so as to make an upright of the figures and also take one inch from the top.

L. N. G.—A very attractive road-view, but with the road itself too much in evidence. If you had stepped to one side of the road and held the camera rather high you would have had a better composition. The print, as it is, would be improved by trimming off the nearest pole on each side and cutting the foreground $1\frac{1}{2}$ inches. This removes the ugly lines of the poles and concentrates the interest on the trees and attractive distant view.

D. B.—It is a truism that praise, whether merited or not, can be had easily from the home-circle or persons not disposed to offend you. In the picture "Lake Geneva" the water-line is not level, the buildings appear to be falling over and there is no gradation. The darkest parts are too dark to be natural, and, had the exposure been correct, or more light been given to the



MOWING

GEORGE W. FRENCH

THIRD PRIZE — BEGINNERS' CONTEST

in at the top margin indicate that by getting farther away one or more interesting tree-shapes might have been included with great advantage.

V. N. D.—Your print of the roadway is either from a much underexposed negative or is made on a printing-paper not suited to the plate. The lights are so strong that at first sight one has the impression that there is snow on the ground. If the negative is lacking in high-light detail there is little that can be done except to reduce it, but if the detail is there a soft-working paper fully printed should bring it out.

C. F. C.—An admirable portrait. The quality is excellent both in the flesh-tones and the white drapery. The pose is a trifle stiff, especially the left hand, and the background is entirely too dark. Even a black ground,

exposure, with careful and skilful developing, the results would have been better.

B. D.—Your marine, "Evening in May," is divided in halves by the water-line. This offense is doubled by the mast of the yacht cutting the picture in half vertically, and the water-line running uphill, dividing it virtually in halves horizontally.

D. B. J.—The picture "Long May She Guard Us" offends in a similar manner. The blacks here are abnormally and unnaturally black, the main object being exactly in the center of the picture—contrary to all art-rules. Technically, the picture is not any better than the rest. The same subject has been done many hundred times by others and in a very much better way. I think it worth another trial by yourself.

Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of the time in the table. From 8000 to 12000 feet use $\frac{1}{2}$ of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

*These figures must be increased up to five times if the light is inclined to be yellow or red. Latitude 60° N. multiply by 3; 55° × 2; 52° × 2; 30° × $\frac{3}{4}$. Latitude 60° N. multiply by 2; 55° × 2; 52° × $\frac{1}{2}$; 30° × $\frac{3}{4}$. Latitude 60° N. multiply by $\frac{1}{4}$; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$. Latitude 60° N. multiply by $\frac{1}{4}$; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$.	MONTH AND WEATHER																			
	JAN., Nov., Dec. †					FEB., OCT. ‡					MAR., APR., AUG., SEPT. ¶					MAY, JUNE, JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
	11 A.M. to 1 P.M.	10-11 A.M. and 1-2 P.M.	9-10 A.M. and 2-3 P.M.	8-9 A.M. and 3-4 P.M.	7-8 A.M. and 4-5 P.M.	6-7 A.M. and 5-6 P.M.	5-6 A.M. and 6-7 P.M.													
11 A.M. to 1 P.M.	$\frac{1}{3}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{6}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
10-11 A.M. and 1-2 P.M.	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
9-10 A.M. and 2-3 P.M.	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	1^*	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	1^*	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$
8-9 A.M. and 3-4 P.M.						$\frac{1}{5}$	$\frac{1}{2}$	1^*	1^*	3^*	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$
7-8 A.M. and 4-5 P.M.											$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$
6-7 A.M. and 5-6 P.M.											$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1^*	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
5-6 A.M. and 6-7 P.M.																$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$	$1\frac{1}{2}$

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

SUBJECTS. For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, glades and under the trees. **Wood-interiors** not open to the sky. **Average indoor-portraits** in a well-lighted room, light surroundings.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

For Perpetual Reference

For other stops multiply by the number
in the third column

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.	U. S. 1	F/4	× 1/4
	U. S. 2	F/5.6	× 1/2
	U. S. 2.4	F/6.3	× 5/8
	U. S. 3	F/7	× 3/4
	U. S. 8	F/11	× 2
	U. S. 16	F/16	× 4
	U. S. 32	F/22	× 8
	U. S. 64	F/32	× 16

Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply $1/16 \times 4 = 1/4$. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. $1/16 \times 1/2 = 1/32$. Hence, the exposure will be 1/32 second.

Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.

Ilford Monarch
Lumière Sigma
Marion Record
Seed Graflex
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.

Anso Speedex Film
Barnet Super-Speed Ortho.
Central Special
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Imperial Special Sensitive
Seed Gilt Edge 30
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.

Barnet Red Seal
Cramer Instantaneous Iso.
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Ilford Zenith
Paget Extra Special Rapid
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.

American
Anso Film, N. C.
Atlas Roll-Film
Barnet Extra Rapid
Barnet Ortho. Extra Rapid
Central Comet
Imperial Non-Filter

Imperial Ortho. Special Sensitive
Kodak N. C. Film
Kodoid

Lumière Film and Blue Label
Marion P. S.
Premo Film-Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso. Speedy
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.

Cramer Banner X
Cramer Isonon
Cramer Spectrum
Defender Ortho.
Defender Ortho., N.-H.
Eastman Extra Rapid
Hammer Extra Fast Ortho.
Hammer Non-Halation
Hammer Non-Halation Ortho.
Seed 26x
Seed C. Ortho.
Seed L. Ortho.
Seed Non-Halation
Seed Non-Halation Ortho.
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.

Cramer Anchor

Lumière Ortho. A
Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.

Cramer Medium Iso.
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.

Barnet Medium
Barnet Ortho. Medium
Cramer Trichromatic
Hammer Fast
Ilford Chromatic
Ilford Empress

Seed 23
Stanley Commercial
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.

Cramer Commercial
Hammer Slow
Hammer Slow Ortho.
Wellington Ortho. Process
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.

Cramer Contrast
Cramer Slow Iso.
Cramer Slow Iso. Non-Halation
Ilford Halftone
Ilford Ordinary
Seed Process

Class 100, P. E. 11 Wy. 3, Wa.

Lumière Autochrome



OUR ILLUSTRATIONS

WILFRED A. FRENCH



OWING to a miscarriage of plans, the strikingly successful portrayal of a breaker, by Harold A. Taylor, that embellished the text of the June issue, failed to appear on its front cover, and so fulfils the latter purpose for July. Reproduced in monochrome, this highly pleasing marine assumes a more graphic character, and suggests a feeling of the fresh, cooling seashore. Data will be found in the preceding issue.

I remember well the international expositions of Philadelphia (the Centennial), of Chicago and St. Louis, not forgetting the Pan-American show of Buffalo; but none of them yielded the truly pictorial opportunities as did the San Francisco Fair, two years ago. Although several well-known amateurs have added to their laurels by the manner in which they pictured the novel and artistic architectural effects which they found on this occasion, none of them excelled the work in this productive field of endeavor of W. H. Rabe, from whose bountiful portfolio of "Frisco" impressions not a few have already adorned these pages. In the present instance, the Court of Universe Fountain (frontispiece) displays the rare artistry of Mr. Rabe as applied to an inspiring subject. Here, too, one notes how the artist has scorned to avail himself of a possible opportunity to present one of those technically perfect reflections which some camerists regard as something wonderful, and which, as a matter of fact, require no ability beyond obtaining an uniformly sharp focus. With but a little imagination, the beholder can satisfy himself that, realistically mirrored, this beautiful colonnade becomes nothing more than a common-place record. The present picture meets the requirements of artistic composition and individual treatment, and is a credit to the author's rare powers of interpretation. The data, which show Mr. Rabe's resourcefulness and skill in using a cheap and modest equipment and in discouraging circumstances, have been printed on several fitting occasions.

In referring, as I have done many times in the past, to Mr. Davis' illustrations, I wish to emphasize the fact that while he generally provides admirable examples of the points he makes in his articles, he intends to suggest artistic possibilities. It is up to the reader-camerist to find or to create such opportunities, and to exercise his ability and taste, with the aid of Mr. Davis' counsel. In this endeavor, he may fall short or he may excel his teacher's illustrations; and should he achieve an artistic success, none will be more pleased than Mr. Davis.

There was a time — and not so very long ago — when strenuous agricultural work by the women of Europe — not to forget other parts of the world — was looked upon by their American sisters with horror. That was not so much a matter of choice as of necessity, with the men away doing military duty or absorbed by the industries. Lately, however, consequent upon the world's war-conditions, the women are taking the places of men in nearly every walk of life, including cases of severe physical labor, and always doing it well. As an illustration, study the picture, "Woman to the Rescue," page 8, and you cannot but feel that here is depicted, convincingly, efficient and conscientious effort. Would the men do it as well? Data: "Somewhere" in Europe; 3A Autographic Kodak, $3\frac{1}{4} \times 5\frac{1}{2}$, fitted with a $6\frac{1}{2}$ -inch Goerz Dagor in ordinary shutter; Eastman N. C. film;

developed (like most of Mr. Dawson's exposures, near the scene of action) at night, in the open. His stock of negatives, made at or near the European battle-fronts, numbers over 50,000, and some of them are very thrilling and not one of them is faked. If interested, address Brown & Dawson, 30 East 42d Street, New York, N. Y.

The portrait of George Eastman, page 11, is straightforward, modest, unassuming. It is the man to the life. No man in the industrial world has made a greater name for himself. His success has been remarkable, and the results have been achieved in a quiet, but effective, way. He created with his own brains the vast enterprise of which he is the head; and while he has been the object of envy — of individuals less capable and industrious — and has devoted himself assiduously to the affairs of his company, he has manifested unsuspected traits of human sympathy and generous philanthropy in all deserving cases, but always without display or for worldly motives. It is hardly necessary to continue with this pleasant topic. To do it justice would require the space of a complete issue of this magazine. Besides, George Eastman has been the subject of biographical sketches a number of times, and the world is now pretty familiar with the importance and influence of his position as one of the foremost captains of industry and the principal figure in the photographic manufacturing field. No data.

By referring to the notice, in January PHOTO-ERA, of the annual members' show of the Y. M. C. Union Camera Club, Boston, one will see that G. H. Seelig won the first prize, in the "Miscellaneous" class, for his highly meritorious "Morning-Gallop." The riders are about to turn to the right, into the bridle-path, but the action might induce some beholders to believe that they were to continue along the broad sunlit road, which impression may be based on the principle of following the direction of interest. As a matter of fact, what appears to be a prolongation of a wide road is a sloping, brilliantly illumined bank, up which the equestrians are not likely to continue their way. The picture is unconventional in design, and in treatment shows commendable artistic skill. Data: September, 11.30 A.M.; bright light; Ansco Vest Pocket No. 3 ($2\frac{1}{4} \times 3\frac{1}{4}$); Zeiss Kodak lens of $3\frac{1}{2}$ -inch focus, at F/8; $\frac{5}{16}$ second; Eastman N. C. film; print, P. M. C. No. 7; enlarged with "Portland" soft-focus lens; stop, F/8.

Among the places to be enjoyed by visitors to Boston, this summer, is Salem, which, with adjoining Danvers, is associated with the old witchcraft-days. Incidentally, it may be well to correct the prevailing impression that, in Salem, "witches" were burned. Hanged, yes; but not the other. For those incidents, Salem may be notorious, but not eminent. Here, examples of the best period of distinctly American domestic architecture may be found. Indeed, they have excited the admiration and interest of every first-rate architect and of every connoisseur in America, as a consequence of which a prominent Boston book-publisher issued a rare book on the subject — "The Wood-Carver of Salem," reviewed in PHOTO-ERA, January, 1917. Among the representative houses of this "Colonial" period of architecture, and described in this authoritative volume, is the Pierce-Johnnot-Nichols House, 80 Federal Street. It was erected and decorated by the

eminent Samuel McIntire in 1782, and, inside and out, is worthy the serious attention of the visitor. No data.

Eager to initiate our efforts to popularize New England this season, we used the plate of Dixville Notch, in the White Mountains, for the June front-cover, at which time information from its author, Edwin J. McLaughlin, was not available. This is supplied below, and the picture reappears, this time as an inside illustration, page 17. A description of the locality appears elsewhere in this issue. Data: August, 2.20 P.M.; bright, clear sky; 5 x 7 Poco camera; 7½-inch Turner-Reich; stop, F/16; ⅓ second; Standard Orthonon, Extremely Rapid; Ortol; 11 x 14 enlargement. Clouds put on print with air-brush.

Another beauty-spot in the White Mountains, and a great favorite with visiting camerists, is Glen Ellis Falls, at the foot of Mt. Washington, between Gorham and Jackson. Among the numerous photographs I have seen of the pretty waterfall, Mr. Ford's presentation, page 23, is the best. Desiring to avoid brilliant highlights or the boulders that are grouped around the base of the fall, and, at the same time, to illuminate the sides of the chasm through which the water is descending, Mr. Ford chose his light at an opportune moment. The picture is well spaced, and the center of interest is set forth without too sharp an emphasis. The light is so distributed that a harmony of tones is the result, yielding a full scale of gradations. Data: September, 11 A.M.; clear sunlight; 5 x 7 Century camera; 8½-inch Goerz No. 3; stop, F/16; 5 x 7 Orthonon; direct Velox Regular; camera about 40 feet away from the foot of the fall, which is a little over 700 feet high.

That rare and accomplished artist, Fannie T. Cassidy, favors PHOTO-ERA readers with still another of her pictorial gems — a pair of white rabbits placed in a dark, rich setting, page 24. The result is strikingly effective, yet tempered by fine artistic judgment. Data: August, 9 A.M.; bright sunlight; 5 x 7 Auto Graflex; 8½-inch Goerz Dagor, at full opening; ⅓ second; Standard plate; tank-development; 8 x 10 enlargement on Eastman Royal Bromide paper with Smith soft-focus lens.

Advanced Workers' Competition

As has been stated several times in this department and elsewhere, and attested by convincing examples of his exceptional interpretive and executive ability in photographic portraiture, Dr. Kilmer may safely be classed with the foremost professionals in this country. Ordinarily, such a comparison would be of doubtful value, in view of the fact that, for obvious reasons, the skilled amateur generally surpasses his professional brother in novelty of composition and pictorial merit. But in high-class portraiture — the most difficult of all the many branches of photography — the successful practice of which requires many years of the right kind of training and preparation, the same as in painting, sculpture or architecture, and under favorable conditions, the amateur cannot hope to compete with the professional except in rare cases. Any room will not do; nothing less than a well-appointed studio is necessary. That is why such portrait-photographers as Goldensky, MacDonald, Garo and Edmondson — men who are of all, born artists, and who provide themselves with the most approved apparatus and accessories — are able to produce portraits that few amateurs can equal. Dr. Kilmer is an exception by reason of native artistic feeling and power and concentrated executive skill. He is in reality a home-portrait photographer, excelling in a field taken up by many prominent professionals, and who require equipments that shall yield satisfactory results amid frequently discouraging surroundings. Naturally, Dr. Kilmer uses

a professional outfit, but employs individual methods, and, aided by a felicitous personality and manner, he is able to reveal the soul of his sitter. He thus obtains a likeness of a friend, the fidelity of which would be difficult to match even by an experienced professional artist. There is no doubt in my mind that the portrait of Dr. H., page 31, is a happy and faithful characterization, satisfactory alike to the sitter and the artist. The head is plastic and well-modeled; the expression has not been marred by retouching, and the pose is easy and restful. As a mark of judicious technique, the collar is in a low tone — not by having been manipulated in the negative or print, but by sensible illumination. The student should follow the direction of the light, and he will see "the light." Data: Dr. Hampton P. Howell; 11 x 14 portrait-camera; 18-inch Verito lens; F/5.6, used at full opening; 7 seconds; Cooper Hewitt light; 8 x 10 Stanley plate; pyro-soda, tank-development; 8 x 10 Artura print. To those who are not familiar with Dr. Kilmer's manner of procedure in making home-portraits, I recommend his masterful article, with a number of illustrations and diagrams, "Photographic Portraiture," published in PHOTO-ERA, October, 1916.

"The First-Born," page 33, is by a very competent professional portraitist, the picture evidently having been made in the home of the sitter. There is a charm, ease and spontaneity of expression in this group that would be difficult, if not impossible, to get in even the best-appointed professional studio. Whatever obstacles in light and convenience may have been present — even in this sumptuously furnished apartment — were overcome with eminent success. The distribution of light is specially remarkable, and the technical excellence is exceptionally high. As a group-portrait, pure and simple, it appears above reproach, refinement and grace in the arrangement being likewise in pleasing evidence. As a whole, this intimate family-group appears to be a brilliant technical success. Data: Portable skylight and window; 8 grains of Victor Normal Flash-powder used to lighten shadow-side; Wollensak, series II, Velostigmat; stop, F/4.5; instantaneous exposure; 8 x 10 Seed 30 plate; Eastman Tank Powders; 8 x 10 print on Platinum Cyko.

Though taken indoors, Mr. Field's child-portrait, page 34, is aglow with sunshine. The little figure is plastic and the face is finely modeled. The portrait speaks eloquently for Mr. Field's well-known artistic power. Data: April, 1917, 3 P.M.; light from two windows, sun streaming through the smaller one; 8 x 10 portrait-camera; 14-inch Heliar, used at full opening; ½ second; Seed 30; pyro-soda; print on Iris E smooth.

Beginners' Competition

ALVAH G. CLARK is to be commended for picturing a subject that rarely engages the attention of the camerist. Page 37. It is welcomed in this magazine chiefly because of its element of freshness and unconventionality. The arrangement — evidently there is none, unless the willingness of the students to hold still for a brief period may be called such — leaves something to be desired in the matter of unity; but shortcomings can be overlooked because the general result is so good. Data: March, 3.30 P.M.; bright sun, coming through skylight; 8 x 10 Eastman view-camera; 12-inch Goerz, No. 6; stop, U. S. 32; 20 seconds; 8 x 10 Cramer Inst. Iso.; Rytol; direct print on Artura, Iris-Grade A; Rytol.

"Sylvia," as pictured on page 39, is the subject of an attractive home-scene — one that the parents cannot fail to treasure. The lighting, the rendering of the flesh-tints and the composition are quite admirable.

(Continued on page 53)



ON THE GROUND-GLASS

WILFRED A. FRENCH



A Moving Picture

SOME say that it's cheaper to move than pay rent. I have just moved and know it is n't so. It was no easy task. Just think of nearly twenty years' accumulation in the various departments! There were old cash-books; invoice-books; cheque-books; index-cards; filing-cabinets; letter-files; numberless packages of canceled cheques; and receipted bills—yes, receipted, every one of them!—piles of collections of successful photographs in two competitions a month for ten years; hundreds of photographs, without the names of the makers, still waiting to be returned—any of yours among them?—a large array of framed masterpieces; portfolio after portfolio of selected prints, by well-known pictorialists, waiting to be framed and to adorn the new offices. Then there were cabinets filled with prints that have been halftoned; others waiting their turn to be halftoned; tier upon tier of cases filled with halftones published in *PHOTO-ERA* since 1898—about 9,000 of them; piles of *PHOTO-ERAS* since the beginning (1898); stack after stack of foreign exchanges, some extinct, others flourishing and some just existing.

I cannot overlook the bookcases constituting our extensive photo-library; the office-furniture—roll-top desks, flat-top desks, counters, shelves, tables, chairs, mirrors, office-clock, wardrobe, umbrella-stand, etc.; cameras and tripods; projection-apparatus with screens; office-stationery; thousands of stamped envelopes; and last, but not least, the office-safe. Not in evidence, however, neither concealed nor left behind, were cooking-utensils, cupboards, card-tables, bottles or containers of familiar shape, glasses and the like (we don't indulge on the premises). The new offices were filled to the ceiling with the goods and chattels of the Publisher; the corridors were choked, and at 6 P.M., fatigued and alone, sat the Editor-Publisher, surveying the scene of disorder with unrestrained dismay.

It is all over now, and the sun smiles serenely upon the new and superior quarters of *PHOTO-ERA*, from whose lofty and slightly windows one may obtain extensive views of greater Boston and an exhilarating sense of freedom.

Humorous Animal-Pictures

A COMPARATIVELY neglected photographic field is the humorous treatment of animal-subjects, as exemplified by Kate Hecht and Lehman Wendell in *PHOTO-ERA*, not long ago. The former specialist showed in her mirth-provoking pictures of domesticated pets—ravens, mice, toads, etc.—what could be accomplished by ingenuity, skill and patience, seconded by a responsive equipment. The results she achieved have probably never been equaled. Mr. Wendell, on the other hand, utilized orthopterous insects (grasshoppers), which, after having been chloroformed, easily yielded to grotesque, animated poses. I saw recently in Pinkham & Smith Company's Bromfield Street store a series of photographs picturing comical episodes between little chicks and angle-worms, garden-snakes and insects. The camerist is Mr. G. S. Osborne, of Greater Boston, who has promised to describe to *PHOTO-ERA* readers his method of managing these diminutive creatures. But,

however the camerist may extend this interesting activity, let him avoid the overworked fad of humanizing cats or dogs—making Tabby pretend to photograph Fido, or picturing Rex ensconced in an easy-chair enjoying his pipe and morning-paper, or some equally impossible act. There are enough opportunities in every-day animal-life to tempt the camerist with an eye to the humorous, in whatever form, without resorting to artificial and unconvincing representations.

The Villain Run to Earth

WHEN I was doing a bit of work by a rather tricky process which I had not used for some time, I wanted enlightenment on an obscure point in connection with it. Nowhere could I find any clear pronouncement, but I turned hopefully to a mighty tome of reference on all photographic subjects, and read the article dealing with the process in hand. To my disgust I found that the very point on which I required information had been carefully slurred over. In a most ingenious manner the wretched author of the article had maneuvered round the patch of thin ice so as to convey the impression that he had gone straight over it. I was about to pour forth a string of maledictions on the cunning deceptive rogue when it dawned upon me that I had written the article myself.—THE WALRUS.

Those Resourceful Germans!

EVEN before the war is ended, the brain of the versatile story-writer is working overtime, recording thrilling tales of intrigue and espionage. Brother Bayley, the tireless editor of *Photography*, relates a good one that he had heard. "An affectionate husband, with an attractive wife and one child, had taken a furnished house in the east of France. The couple was devoted to its infant, whom it took out daily in a perambulator. Prying local authorities, however, discovered the husband to be a German officer, the wife also was nothing more feminine than a lieutenant in the same service, whereas the baby was a photographic outfit for recording details of the country, fortifications, bridges and other strategic objects."

One of Many

Dear Mr. French:

With reference to the "Our Illustrations" department, which appears in each issue of *PHOTO-ERA*, I can honestly say that to me it is by far the most interesting feature in the magazine. I would not suggest a change in its general make-up under any consideration. Let the other fellow kick if he wants to and if it gives him any satisfaction; but, as the colored lady said, when being kissed by her intended. "Keep right on with the treatment!" and continue the department in your own way.

I always read this section first, before any of the special articles, and, to tell the truth, I derive more pleasure and profit from it than from any other column. I suppose that the real reason for this is its personal tone—to me just like a pleasant chat with the editor. Let the good work go on.

Cordially yours,

WM. LUDLUM, JR.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



Keep Art Alive Despite the War

ALTHOUGH the primary object of the Massachusetts State Federation of Women's Clubs, at its annual convention, June 6-8, was to consider ways to help the country in its present needs, Mrs. Walter S. Little, of Bridgewater, entreated her sister-delegates not to drop art-activity because the nation is at war. "If we anticipate times of stress and gloom, let us not prepare by abandoning all that is cheerful," she said. "Rather, let us get ready by keeping alive every interest which brightens and gives color to its existence."

Of course, in her exhortation, Mrs. Little included pictorial photography. A similar plea was made, editorially, in PHOTO-ERA several months ago.

Prizes for Photographs of New England Scenery

AMATEUR photographers who contemplate visiting New England this summer may be interested to know that the *Boston Sunday Herald* pays cash for acceptable prints of New England scenery. These and other prints may be entered for competition in the "Herald Picture-Exhibit"—to be held in the course of the summer—where prizes up to \$20.00 will be awarded.

Copies of the *Sunday Herald* containing rotogravure illustrations of the latest "Herald Exhibit," and ready for mailing, have been courteously provided by the *Herald* management, and will be sent gratis, post-paid, by PHOTO-ERA to interested camerists.

For Those Who Visit the Hub

TOURISTS, wherever they may be, who intend to visit Boston this year are urged to read "The Book of Boston," by Robert Shackleton. A better book on the subject has never been written, and a brief review appears elsewhere in this issue.

The Truth About the American Navy

THE June number of *Sea-Power*, one of the youngest but brilliantly energetic and ably managed monthlies devoted to the potential power of the sea, appeals to the practical patriotism of every American. With exemplary enterprise and foresight, it presents several important and timely aspects of America's fighting navy, but without brag or bluster, so that the country, realizing, at last, the existence of a serious menace, may see what are its means of attack and defense by sea. The text and illustrations command the highest praise and true admiration. We heartily commend this publication to our readers. For sample copies and other information address the Sea-Power Publishing Co., Southern Building, Washington, D. C.

Traveling Exhibition 1917-1918

"THE Pictorial Photographers of America have made arrangements with the following art museums to hold exhibitions of pictorial photography from September, 1917, to March, 1918: The Institute of Arts, Minneapolis; Milwaukee Art Society; Chicago Institute; City Art Museum of St. Louis; Toledo Museum of Art; Detroit Museum of Art; Cleveland Art Museum.

"The collection will also serve as a traveling exhibition for other museums with whom we are now negotiating. It is intended that this exhibition comprise the work of members of this Association, also that of all prominent photographers in America. We therefore cordially invite your coöperation, and ask that you send to us, August 1, at the latest, not more than ten of your selected prints, with prices and titles.

"We intend to have all prints uniformly framed for their protection and for the sake of harmony. After our selection has been made, we shall ask you to send us \$1.00 for each print chosen for exhibition, this sum being necessary to defray the cost of framing. When the exhibition is over, the framed prints will be returned to you, properly packed.

Yours very truly,
PICTORIAL PHOTOGRAPHERS OF AMERICA."

All who are interested in this invitation are asked to write for detailed information to M. de M. Brown, Corresponding Secretary, 119 East 19th Street, New York City.

Charles F. Inston, F.R.P.S.

THE death, May 4, of Charles F. Inston, in his sixty-first year, removes one of the strongest personalities in the world of photography during the past twenty years. Although he was a master of his craft, he seldom wrote of his work. Strangely enough, the single article from his pen in the last ten years appeared in *Kodak Bromide Pictures*, and is to be reprinted in August PHOTO-ERA.

Business-Meetings at the Milwaukee Convention

DESPITE the war conditions now existing in this country, the Milwaukee Convention promises to be largely attended, and no doubt will be a success. The most important business meeting the members of the Association have had an opportunity to participate in since 1912 will be held at the National Convention in Milwaukee. Since 1912 all the business of the Association, except the election of officers and the selection of the next place of meeting, has been handled by the Congress of Photography, which consists of two delegates from each state.

Since 1911 the conventions have been held alternately east and west of a certain line. The Constitution of the Association provides that this article shall not be altered before 1917; but the Board has arranged for a business meeting where both the above propositions may be decided by the entire membership in attendance.

Congress was proposed to overcome two very obvious difficulties. First, the territory in which the convention was held exercised an undue influence on Association affairs, as it always was more strongly represented than any other territory. Therefore, Congress, a delegate body with the same representation from each state, gave the same power to all sections of the country, regardless of where the convention was held. Second, the entire membership was an unwieldy proposition which made it difficult to transact business. There was a great deal of talk and very little action; but the

fifty to one hundred men who have represented their states in the Congress have formed a compact organization which tends towards the expediting of business, and the conclusions arrived at by this body were just as good for the Association as if the entire membership had taken time to decide the matter.

You are requested to give these propositions your serious attention, and come to Milwaukee ready to vote one way or the other on each of them, or ready to propose a plan which will serve the needs of the growing Association more readily. Remember the dates, September 3 to 8.

Kansas City Camera-Club

A VERY neat booklet listing the officers, members and lecture-dates of the Kansas City Camera-Club is at hand. The systematic arrangement of the booklet ought to make it a model for other camera-clubs that contemplate issuing a membership-list. It contains just the information desired and no more; it is well worth reading.

Shows by Karl Struss and the Oregon Camera-Club

DURING the week ending June 9, the B. Y. M. C. Union Camera-Club, Boston, Mass., showed on its walls a large collection of prints, 4 x 5 originals and enlargements, by Karl Struss. The subjects were street-scenes and landscapes, many being taken in Europe. The prints exemplified Mr. Struss' well-known characteristics, such as refined taste of composition and judicious breadth of treatment. The collection was greatly enjoyed by the club-members and their friends.

During the week ending June 16, a collection of prints by members of the Oregon Camera-Club was displayed — too late, however, for a notice in this issue.

A Novel Photo-News-Service

THOSE who have met George W. Harris, the portrait-photographer, of Washington, D. C., or have heard him deliver an address at a photographers' convention, are familiar with the intense earnestness and energetic activity of this little man. His firm, Harris & Ewing, photographs the resident and transient nobilities of the Capital. To get a "Capital" portrait of a member of Congress, a government officer, diplomat, a justice, a military man, or any person of distinguished prominence at Washington, is to apply to Harris & Ewing for it. To familiarize the American press with the active political and social life at the Capital is the aim of this firm, by means of a new enterprise in the form of a photographic-news-service, consisting of a number of original photographs of persons and events. As proof of the high character and quality of this service, Harris & Ewing have issued, recently, a beautifully printed pictorial announcement, a copy of which will be sent free to any PHOTO-ERA reader who applies for it.

One-Exposure Color-Cameras

A. E. CONRADY and A. Hamburger have patented a construction of one-exposure camera in which the distortion produced by reflector filters is corrected by suitable distortion of the filters themselves by application of pressures at points around the edges.—Eng. Pat. No. 28,722, 1912. "B. J.," Feb. 6, 1914, p. 106.

A. Dawson has patented a one-exposure camera for three-color photography in which the correction, or elimination, of distortion, due to the transparent filters, is effected by interposing, between the lens and the sen-

sitive plates, transparent elements of curved surface. The form of the curved surfaces will in each case depend upon certain variable quantities, such as the thickness, form and angle of inclination of the transmitting reflecting-elements, the focal length of the lens, cruciform arrangement, etc., and the curvature may be circular, elliptical, parabolic, or hyperbolic in form, or any combination of these forms.—Eng. Pat. No. 24,538, 1912. "B. J.," Mar. 13, 1914, p. 200.

British Journal of Photography

Field for Landscapes

The ruggedness of the granite hills, within whose rare atmosphere and lofty grandeur the photographer may well feel the thrill in that remarkable landscape "Dixville Notch."

The Notch is a steep and rugged pass, whose towering cliffs and splintered rocks rise almost perpendicularly, making a very wonderful picture for the camerist who is seeking views of the great wonders of nature.

My photographic work in this section has been mostly in the nature of a pastime, and from the variety of views I have obtained, I feel satisfied that my efforts have been well repaid.

The amateur photographer will find, gathered within this comparatively small area, more striking pictures than the most experienced photographer can discover by searching closely over half the continent.

In looking for views from a mountain-top, I have found here a landscape sharply defined and quite different from the ordinary views seen from most summits — a point which, I am sure, must interest all lovers of landscape-photography.

With my experience in the wild and rugged mountains of the north, I must say that the camerist can never work in vain in this region. In common inspiration and interest, you may find the secret of one's point of view, and in this lies the success of the amateur photographer.

EDW. J. McLAUGHLIN.

Steamed Bromide Prints

A NEW idea with regard to Bromide Prints is given to photographers by C. R. D., in the *Amateur Photographer*. It may not be very well known that the surface of a black and white bromide print can be improved greatly in a very simple manner. We have all of us observed what a splendid velvet-like quality a print has when seen in a wet state, and how dull and lifeless it looks when dried, compared to its original state, and many of us have wished that we could preserve that appearance. To do this the print is taken and pinned — before trimming — to a piece of flat wood by the four corners. A kettle full of boiling water with the steam issuing from its spout in a large stream is placed in a suitable position, and the surface of the print passed across this, taking care not to let it stop too long on one place; if this is done over the whole of the print for a few seconds, and then allowed to cool, the difference will be at once apparent. This hint is very useful when any pencil work has been done on the surface of the print, because the action of the heat on the gelatine causes this to melt, and consequently the lead is incorporated into the film.

Photography of the Nude

"THE naked hills lie wanton to the breeze,

The fields are nude, the groves unfrocked;

Bare are the quivering limbs of the shameless trees —

What wonder is it that the corn is shocked."

Exchange.



WITH THE TRADE



The Tremont Camera-Exchange

WHENEVER we know of a camera-exchange that deals fairly, carries only first-class goods and is a credit to the business, we take pleasure in saying so. The Tremont Camera Exchange, since its beginning, has been successful, and has won its present high reputation strictly on merit. At present an unusually complete stock of imported cameras and lenses, in perfect condition, is offered to the discriminating purchaser. The Tremont Camera Exchange, managed by an expert, has the endorsement of the Publisher of PHOTO-ERA.

A Note of Warning

WHEN buying or selling second-hand photographic lenses, it is advisable to use the utmost care in order to make sure that the lens is genuine. It is a well-known fact that in many instances lenses are being sold as the product of some reliable manufacturer, although as a matter of fact the genuine lenses have been replaced by a cheap rectilinear or an absolutely worthless piece of glass, the original cells of the manufacturer being made use of to deceive the buyer. If a lens is not bought from a reliable dealer, it is always advisable to submit the same to the manufacturer to be tested, and this is generally done free of charge.

A specific case of this kind has just been brought to our attention by the C. P. Goerz American Optical Company of New York. A lens bearing the engraving, GOERZ SERIES 3 No. 7, 14-inch focus, No. 43711, was brought to them with the complaint that the lens was not working satisfactorily. Upon testing the lens it was found to be a counterfeit of the worst kind. We urge all dealers and photographers to be on their guard. Some one had taken the mounting of a Goerz Series 3 No. 7 lens and placed it in an absolutely worthless piece of glass and disposed of it as a high-grade anastigmat.

The 1917 Graflex Catalog

As usual, the new Graflex catalog is fully up to expectations. The cover and excellent illustrations give ample evidence of focal-plane camera-efficiency. The new F. & S. Finger-Print Camera is listed, and this equipment will be of interest to many. Constant effort to improve Graflex cameras has resulted in a product that to-day is adapted to every photographic requirement. Every beginner, amateur and professional photographer should obtain the new Graflex catalog and read it thoroughly.

Fine Focusing

IN cases where really critical focus is required there is only one method that is really practicable, and that is the one sometimes described as a parallax, and sometimes as a "null" method, in which the only thing looked for is movement of the image relative to a fixed point on the focusing-plane. Usually for this method we are told to use a clear glass-screen with some scratches upon it, but recently we have been experimenting with a somewhat less primitive arrangement, with which the extraordinary delicacy of the method was made very evident. The focusing-screen consisted of a strip of plate-glass with a fine millimetre scale en-

graved upon it. The object was another coarser scale engraved in black on white, and this was focused so that the two scales were superimposed in the focusing-plane. The observations were made through a Stanhope magnifier, which is an excellent thing for the purpose, as it cannot be put out of focus and gives no distortion. Focus upon any particular line was easily obtained by a very slight movement of the head, just sufficient to show up any parallax effects if they existed, and focus was only considered satisfactory when an image line showed no trace of movement relative to the two adjoining scale-divisions in the focusing-screen. The lens used was a good anastigmat, possessing about as flat a field as can well be shown by any actual lens, but wherever the field varied from the absolutely flat condition the fact was rendered evident by movement of the divisions of the focused image. On running the magnifier from end to end of the scale several places could be found where focus was perfect owing to the actual image field intersecting the focusing-plane, whereas at intermediate places the focus was distinctly out. These differences could not possibly have been observed on ground-glass or any "fine grain" focusing-screen, and probably not in an actual photograph unless it was very considerably enlarged.

British Journal of Photography.

Preparing an Original for Copying

PHOTOGRAPHY makes such very faithful copies that every imperfection in the original is likely to be as conspicuous in the photograph, and so it becomes important to see before making a copy that the subject is presented before the lens in as perfect a condition as possible. Paper, especially rough paper, is apt to catch dirt, and even if the dirt is not visible in patches it may be present, degrading the whites, and making a result which shall have full contrast difficult to obtain. To get over this a little bread-crumbs may be scattered over the front of the paper and gently rubbed in all over with the palm of the hand, and then carefully brushed off again. In most cases this is all that will be needed; but if it is insufficient it may be supplemented with india rubber. Rubber must be used carefully, however, as it will easily damage the surface of the paper, whereas no such risk is run when bread is used. To remove grease a few pieces of clean blotting-paper should be put on each side of the grease-mark and pressed with a warm iron. If this does not fetch it out the spot may be liberally painted with petrol or benzine and then blotted off. The darkness of a grease-spot, it should be borne in mind, is not an actual discoloration, but is due to the grease rendering the paper more translucent, so that we see through it to what is behind. By backing up the grease-spotted paper with some perfectly white substance the spot will almost disappear. If the original is creased, it may be placed between damp blotting-paper for a few minutes, and then, putting dry blotting-paper on each side of it, it may be ironed. Another method to copy a creased original is to make it quite wet, squeeze it to a clean sheet of glass, back it up with some wet paper, to prevent it from drying too rapidly, and copy it through the glass. An original on thin paper with printing on both sides of it is best copied by being backed up with black paper.—*Photography.*



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

THE BOOK OF BOSTON. By Robert Shackleton, author of "Unvisited Places of Old Europe." Copiously illustrated with sketches by R. L. Boyer and original photographs. Decorated cover. 332 pp. 8vo, cloth. \$2.00, net. Philadelphia: The Penn Publishing Co.

Mr. Shackleton has achieved an enviable reputation as a writer of books of travel, showing a rare grasp of local history, tradition and affairs that enables him to give pen-pictures of places and personages that are delightful and convincing. Certainly no one has viewed the old and the new Boston more clearly or written of it more charmingly than Mr. Shackleton. He gives entertaining sketches of the Adamses, Joseph Warren, General Knox, John Hancock, George Washington, Marquis de Lafayette, General Burgoyne, Paul Revere, Daniel Webster, Bronson Alcott, Edgar Allen Poe, Nathaniel Hawthorne, Ralph Waldo Emerson, Thomas Bailey Aldrich, Oliver Wendell Holmes, Gilbert Stuart, James Russell Lowell, William Dean Howells, Henry Wadsworth Longfellow, Francis Parkman, Henry James, Phillips Brooks and Julia Ward Howe, so far as they played their part, large or small, in the history of the "Hub of the Universe." The author points out the many places and sites in Greater Boston that form bright pages in the book of American liberty, and with the reader makes delightful excursions to historic Cambridge, Concord, Lexington, Salem, Danvers, Provincetown and Marblehead. He talks of the days when, with James T. Fields as the inspiring leader, Boston was the literary center of America, and yet will forever be known as the Cradle of Liberty. Surely, every true American owes it to himself to have a knowledge of Boston on the Charles, no better introduction to which can be had than a perusal of Mr. Shackleton's book. A natural consequence will be a visit to the old city itself.

STEAM — ITS GENERATION AND USE. Small quarto. Full cloth. 335 pages, including complete index. 50 full-page photo-engravings and numerous diagrams. New York: The Babcock & Wilcox Co.

This superb work — as its title implies — is devoted to the construction of machinery (boilers) and its application to the generation of steam. The presentation of this subject is scientifically technical, and is for the benefit of engineers and students in engineering at technical institutions. The illustrations are in the nature of halftone plates of original photographs made by eminently skilled photographic experts. Nothing finer than these photographs and their reproductions can be conceived. They exemplify in a brilliant manner the standard of executive ability that should be the aim of every progressive commercial photographer. The paper and typography are of the highest quality and, altogether, the volume is in keeping with the distinguished reputation of the publishers — the foremost firm of manufacturers of boilers in the world, with enormous plants at Bayonne, New Jersey, and Barberton, Ohio, and branch-offices in Europe.

The book is not for sale, but will be supplied with the compliments of the firm to individuals and institutions properly qualified to receive it.

MARINE STEAM. Small quarto. Full cloth, 220 pages, including complete index. Illustrated with 70 full-page halftones and numerous diagrams. New York: The Babcock & Wilcox Co.

This volume shows the application of forged steel water-tube boilers to watercraft as exemplified by dreadnoughts, fast cruisers of the navies and in fast mail-steamers; also by cargo-vessels, ferry-boats, fire-boats, tugs and whalers. Among the men-of-war in which the company's boilers have been installed are several of Great Britain, Brazil, Argentina, Italy and of the United States. Most of the seventy superb full-page halftone plates of this work are devoted to war-vessels of the largest and most powerful type, the original photographs of which represent the highest technical skill of the photographic expert. They are in every sense examples of that degree of executive ability to which every progressive commercial photographer should aspire.

Like the other volume issued by the Babcock & Wilcox Company, "Steam — Its Generation and Use," "Marine Steam" is distributed exclusively among public libraries, scientific institutions, naval architects and engineers, and students in engineering. Students in commercial photography, eager to inspect the photographic illustrations of this important work, will not lack opportunities to do so.

Focal-Plane Versus Between-Lens Shutter

As the question which is the better is often asked says F. C. L., in *The Amateur Photographer*, it may be convenient to summarize their pros and cons so that the reader may make his own selection. It will be convenient to refer to the first by letter F and the latter by L.

(1) With F the whole of the light passing through the lens impinges on the plate immediately the exposure commences, while with L some time is occupied by the opening and closing of the shutter, so that the full opening of the lens is only acting for a part of the exposure-time.

(2) The speed or brevity of the exposure can be more easily made of very short duration in F by reducing the width of the slit and increasing the speed of the blind-movement.

(3) In F the exposure is made by the slit of the blind passing in front of successive parts of the plate in successive spaces of time. Therefore distortion of the image of a serious kind may arise. For instance, one can imagine the image of a cricketball, moving along the plate at the same rate, in the same direction and coincident with the narrow slit of the blind, resulting in an elongated streak. A circular wheel may be shown as a bent or elongated ellipse.

Our "Miscellaneous" Quarterly Competition

MANY workers occasionally produce pictures of exceptional merit and interest which do not seem to fit any classified subject in the PHOTO-ERA monthly competitions as announced from month to month. Such pictures may be entered in the competition for miscellaneous subjects to be held quarterly, beginning with February, 1917.

The rules, including the award of prizes, that govern the regular PHOTO-ERA competitions for advanced workers will apply to these quarterly competitions. It should be borne in mind that pictures offered elsewhere and rejected may not be suitable.



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported expressly for the PHOTO-ERA MAGAZINE from the patent law offices of Norman T. Whitaker, Legal Building, Washington, D. C. (opposite U. S. Patent Office), from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps.

Patent No. 1,224,984, on Process of Eliminating Salts of the Weak Sulfur Acids from Fixed Photographic Media, has been granted to S. H. Weinhandler, of New York, N. Y., in which substantially the following is claimed: The process herein described of treating a photographic medium, which consists in subjecting the thiosulfate held in the gelatin of the films, to the action of a strongly alkaline solution of sodium hypochlorite for producing a soluble substance, said solution being sufficiently alkaline to open rapidly the pores of said gelatin before said film is bleached, and washing out this soluble substance.

G. W. Leighton and C. S. Babcock, of Chicago, Ill., have been granted patent No. 1,225,146, on Coating-Material for Paper for Photographic Uses, in which the following is claimed: The herein described coating-material for photographic paper comprising ferric oxalate, a soluble silver salt, and a soluble mercury salt; substantially as specified.

A device for Transferring Photographic Prints from Separate Supports to a Single Support has been invented and patented by P. D. Brewster, of East Orange, N. J., the following being claimed: The method of treating photographic prints on transparent supports, comprising treating one of the prints to toughen the emulsion and loosen the same from its support; coating the face of such print with a suitable cement or adhesive capable of setting without drying; placing the other print, face down, upon and in registry with the first print and allowing the cement to set; removing the transparent support of the first print, whereby its emulsion-film is left on the emulsion-film of the other, the two forming a combined print; treating the combined print to toughen the lower emulsion-film and loosen it from its support, and transferring the two emulsion-films to a permanent support.

Patent No. 1,224,328, on Mechanically-Produced Negative and Method of Making Same, has been granted to G. W. Seritsmier, of Chicago, Ill., in which is claimed: A transparent backing provided with a waxy opaque coating, said coating having mechanically formed light-passages impressed therethrough.

A Film-Reel Shaft, bearing patent No. 1,227,094, has been granted to C. Uebelmesser, of New York, N. Y., in which is claimed: A film-roll support, consisting of a lever mounted pivotally in a tubular shaft, a movable collar on said shaft, a tension-spring on said shaft holding the collar in position, a sliding bar in said shaft connected with said collar, and the pivotally mounted lever.

Richard D. Herschel is the inventor of a Camera Focusing-Device, which is disclosed in his patent 1,226,660.

Patent No. 1,226,655, on Motion-Picture Film, has been granted to W. M. Grosvenor, of Ridgewood, N. J.

R. V. Stambough, of Dayton, Ohio, has been granted patent No. 1,226,135 on Process of Motion-Picture Films, consisting in photographing upon the print surface through a lens and simultaneously making a print.

Excellent English

IT is really amazing how poorly English is spoken and written by us Americans compared to the palmy days of forty years ago. It is not so much that English diction is harder than that of any other language, as it is that people have not been properly taught in school, and that they appear to take no pride in using their mother-tongue, although they profess to love and cherish it. Of the several thousand letters we receive in the course of a year—mostly from what might be called educated persons—only a small proportion are written correctly. Nearly every article that appears in PHOTO-ERA needs to be edited and freed of solecisms and errors in grammar. The day was when certain American newspapers were edited by men who were masters of English diction. Whom have we now? The *Boston Herald*, edited by a capable and experienced writer, recognizing these facts, published as the leading article on the editorial page the following letter:

An extract from a letter received by the headmaster of a Boston high school from a Jewish boy who came to America three years ago, at the age of 17, with some education but no knowledge of English. He enlisted a few days ago in a cavalry division.

"Permit me to express to you my heartfelt gratitude and appreciation for all that you have done for me during the three years that I have been a student at — high school.

"You have been, indeed, very kind and charitable towards me, and the atmosphere, the surroundings, were so pleasant and so democratic that it truly overwhelmed me. Here I was made to forget the cruel lot of my people — the Jewish people — and I have found myself to be in the midst of freedom and liberty, and was granted the opportunities for the pursuit of happiness. For all this I am profoundly grateful, and as an insignificant expression of my love and loyalty for this land of the free, which gave me so much, I decided to enlist myself in the American army, so that I may be able to defend with my blood the great principles of our American democracy — the democracy which has been the asylum for all the oppressed and persecuted.

"I wish to convey to you again, — —, that the — high school will forever occupy a big place in my heart, and from your nobility and benevolence I shall always draw inspiration in fighting the battles of our beloved country, to whose service I dedicate myself.

MILTON RUBENSTEIN."

And now follows a gem from the *New York Evening Post* that tells its own story:

"If you should fall into deep water, don't lose yourself. But keep cool, creep on the bottom. Don't let the water rise you. By using judgment one can reach the shore or some rock before *they* let themselves rise. One can creep or walk on hands and feet as long as *they* can hold their breath. By letting the water rise you, you only sink again."



It is not our business to chronicle the entry of the United States into the war, but we may be allowed to point out that the impressive service at St. Paul's Cathedral, which to English people marked and underlined the event, and where the flags of both countries hung side by side, was the occasion of photographic burnings of heart. For some reason that has given rise to strong protests, newspaper-photographers were refused permission to take photographs of the Royal party from the steps of St. Paul's, the privilege being reserved for members of the Royal Flying Corps. One cannot help wondering if these Royal Flying Corps men were home for the usual occasional five days' leave from the French front. If so, they must have found the snapshooting of royalties and ambassadors from the comfortable vantage-ground of the steps of the cathedral a very different matter to the procuring of photographs from airplanes, often many miles *behind* the German lines. On one day alone, in April, the official account stated that large tracts of the enemy's country many miles in the rear were photographed, over 1,700 being taken behind the enemy's lines.

We have lately had the opportunity to examine the negatives of a war-correspondent who, until recently, was with the Russian troops. He went with them through many exciting experiences, and was often in a position to get some extremely interesting photographs. As we went through the films, listening to his vivid descriptions of the circumstances in which they were taken, the thought became ever more insistent: Why don't war-correspondents do better technical photographic work? So many of the negatives told nothing even to the experienced photographic eye, and needed explanations, such as, "Oh, here I snapped three generals together, and at very close quarters," or, "That is an exposure of life in the deep trenches," that one was driven to the conclusion that if only this highly gifted writer — whose pen-pictures of the war are read in two hemispheres — had devoted a little time to mastering the limitations of the camera, he would have come home, probably, with a smaller bulk of negatives but with a far higher percentage of films that would tell their story; for many that we looked at, with all the faking in the world, could never have achieved this purpose. It is only fair to add that some of the subjects had been attempted under most unfavorable conditions of light, and a few were doomed to failure even before the button was pressed. But a little more photographic knowledge would have turned the former into passable successes and prevented the latter from being attempted.

We have been lately experimenting with some of Wellington's "Xtreme" double-coated plates. Speed 400 H. and D. Such a thing as a double-coated plate seems almost a wicked luxury in war-time, and it was only the fact of a packet arriving by post, a gift from a friend, that led us to try them now. It goes without saying that they are delightful to use, and are strongly reminiscent of the old Cristoid days, that bewitching, double-coated, unbreakable film that one treated almost like a piece of linen in the developer. But the Cristoid had a drawback. The fastest of the two emulsions with which it was coated was very slow, and so it came about that if too short exposures were attempted the good qualities of the film were lost. Now the 'Xtreme' plate is so fast that it has not this disadvantage, and yet all the delicate detail in the highlights is preserved even when the exposure has been ample for the deepest

shadows. This plate, no doubt, is one of the surest steps towards good technical photography by the million if only they will or can take to it, for it is not easily obtainable.

Had it not been war-time there would have been a good deal more enthusiasm and interest shown in Mr. John Warburg's experiments and their results. He explained to a Royal Photographic Society audience the other evening the value of certain dyes in the making of carbon- and gum-papers. These can be used as sensitizers provided they are wet. What struck us was the idea that the gum-process, so little in evidence now, might be given a fresh chance; for after all there are few processes that compare with it for certain effects.

But somehow, in these momentous days, all this has a rather unreal and far-away sound. Photography grows more and more utilitarian in its aims, and pictorialism is patiently biding its time until peaceful days, with a plenty of leisure, once more visit the world.

The "Snapshots-from-Home League" has done well in spite of the dreary and long winter. Their little magazine states: "The number of photographs taken by the members during the last few months has eclipsed anything we were able to do during the winter of 1915-1916." A rather amusing little story is told of a woman who asked a "Snapshots-from-Home" worker, "Please, Miss, will my teeth come out?" The puzzled photographer discovered she meant would the teeth, for which her soldier son had lately sent her the money, really show in the photograph. Naturally care was taken to get a pleasant smile which should reveal the beautiful new set and do justice to the generous present.

Miss Evelyn Glover, an enthusiastic worker of the League, has written a play, or rather a playlet, around the idea of this movement. "A Bit of Blighty," as it is rather appropriately called, has been played before Royalty at a command-performance and has had great success in Birmingham and Glasgow. Preceding the play a description of the "Snapshots-from-Home League" and its objects is thrown on the screen, so that the audience may understand the idea of the play, an excellent stroke of propaganda which thoroughly advertises the scheme. All the characters in the play are women, and the photographer has the leading part, being on the stage the whole time. The romance centers itself around the soldier's sweetheart, whose photograph is to be taken.

Our own little bit of "Snapshots-from-Home" business has been the photographing of the felling of the trees in a very beautiful pine-wood behind our house. The wood is needed in France for sleepers for light railroads and a variety of other war-purposes at the front, and the men who are cutting down the trees which have been our pride want photographs of themselves at the work to send to their mates at the front, to prove to them they, too, are doing their bit in the great and wonderful adventure.

CARINE AND WILL CADBY.

Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher of PHOTO-ERA.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.

Our Illustrations

(Continued from page 45)

The artist deserves unstinted praise for this highly successful effort. Data: January 14, 1917, 12.10 P.M.; made in the home; good light; Eastman No. 3 Special ($3\frac{1}{4} \times 4\frac{1}{4}$) Kodak; 5-inch Kodak-Zeiss Anastigmat; F 6.3; 1 second; Eastman N. C. film; hydro-metol; print on Azo paper.

Though every person, without distinction, is supposed to become an agriculturist this year, few amateurs are likely to become proficient in the use of the scythe except after long practice. Whether the performer, as pictured by Mr. French, on page 41, is a regular or an embryonic farmer, is not stated. In any event, the action of the mower evidences familiarity in the use of the implement — the swing is to the manner horn and the man's eye is "on the job." The setting is truly bucolic in character and beauty, and one looks forward with eagerness to similar scenes before the summer is over. Data: August, 10 A.M.; light, hazy; Anasco Speedex, $2\frac{1}{4} \times 3\frac{1}{4}$; 4-inch Anasco Anastigmat; stop used, F/6.3; $\frac{1}{200}$ second; Anasco Film; pyro; Cyko Enlarging Normal print; two hours were consumed in enlarging with slow light; clouds printed in white paper was wet; developed with brush.

Engineering-Photography

SOME excellent hints are given by J. H. Nutter in *Photography* with regard to photographing machinery. "Engineers who wish to have photographs made of their productions are often by no means alive to the difficulties of the work, and do not seem to understand that, because one can walk all round a machine and see its various parts, it may not be possible to photograph it to show them. Space is often very limited, and a wide-angle lens, with all its drawbacks of violent perspective and long exposures necessitated by much stopping down, is unavoidable. It is much if one can get the painting modified to suit photography, and that is often the most that can be done.

"In such cases the choice of position for the camera may be very limited. In some recent work in a crowded shop I was fortunate enough to be able to have my outfit slung from the traveling-crane, and so got a picture of a marine engine which from no point available on the ground-floor could be seen without interruption. The size of the object did not allow any control in position at all; it had to be taken as best it could. By working with a camera some twelve feet from the floor, using a lens of medium angle and dropping the front, a view was obtained which gave satisfaction. In another case, the only possible position for the camera was outside the shop altogether, some window-frames being removed to get a clear view.

"Getting light into the shadows is exceedingly difficult at times. The shop itself may be a mere mass of black machinery and the floor as black as the rest. Something can be done by covering as much as possible of the ground all round with old newspapers, which serve to reflect light up to the underneath surfaces, which are always the worst. Magnesium-ribbon burned close to the ground is helpful; but a whitewashed board should be put below it and another between it and the lens, both to shield the latter and to economize ribbon, as with large objects a good deal is needed, owing to the distance which it must be from the part which is to be illuminated. A bucket of whitewash emptied on the ground makes a fine reflecting surface when the objections to its use can be overcome.

"An unexpected difficulty sometimes arises from the vibration due to the machinery and shafting. This

means that the only chance to do the work is during a mealtime or possibly at the week-end. The use of separate motors for the different machines has lessened this trouble, but it is still almost prohibitive in some places. I have had to use three cameras, exposing all simultaneously, in order to make the most of very limited opportunities; and the same reason makes it important to have lenses that do not call for extreme stopping down. Exposures must be full, as detail is wanted everywhere. It is more necessary to have it than to get full contrasts, as it is usual to work up the photographs a great deal, and contrasts are more easily put in or emphasized than are details."

Smoking in the Darkroom

ACCORDING to H. J. R., in *The Amateur Photographer*, no doubt the best advice on the subject of smoking in the darkroom is "don't." Particles of ash are liable to find their way onto prints and plates that are drying, and so lead to unpleasant consequences. However, there are many workers who, like the writer, find consolation in the weed, and are not completely happy without a briar by way of companion. My own experience is that cigars are the safest darkroom smokes, owing to the coherent nature of the ash, and there is really no harm in lighting up as soon as the red light is extinguished. Ash is almost sure to be blown out of a pipe after it has been alight for a little while, especially if a fine tobacco is smoked. Incidentally, refrain from "lighting-up" — pipe, cigar or cigarette — while a plate or sheet of bromide-paper is in the developing-dish or otherwise exposed.

Stuck Glazed Prints

WE occasionally get inquiries from readers whose trouble consists in the difficulty to remove a print which has been squeezed down to glass for glazing, but, on drying, refuses to strip off. Such an incident is no great matter when a second print can be made; but if, as is sometimes the case, the print is one which has been placed in the photographer's hands for any purpose, its restoration calls for any measure which can be taken. It is our experience that inquirers have usually done all that is possible by way of soaking in water before appealing to us. In such circumstances there are, we think, only two courses which can be pursued with any prospect of success. One is to soak the print upon the glass for a quarter of an hour or so in a formalin bath of about 1:20 strength, then rinsing briefly in water and allowing the print to become bone dry. If that is done, it will often be found that the print, owing to the thorough hardening which it has received, will readily strip off.

The other course is to make a copy-negative through the glass, and from this to prepare a second print for the customer as near to the original in character as can be done. The cautious photographer will adopt this second plan before the first, whereas a still further degree of caution will prevent him from applying the squeeze-process to any print which he is not in a position to duplicate.—*British Journal of Photography*.

To Photo-Era Readers

THE Publisher earnestly requests the readers of PHOTO-ERA to give the preference of their patronage to goods and wants advertised in PHOTO-ERA; for no advertisement, whether large or small, is accepted unless it is trustworthy in every respect. This should be of vital importance to all buyers of photographic material, amateur and professional.

The Best Book on Retouching

MOST of the books that treat on retouching and working on the negatives, with the intention to improve them, are very incomplete and unsatisfactory. Everybody interested has been looking for the ideal book on this important subject, and, considering the opinions expressed by expert professional photographers, PHOTO-ERA takes pleasure in recommending, to professionals as well as to amateurs, the best book on this subject printed in the English language. We refer to the work, "A Complete Treatise on Artistic Retouching, Modeling and Etching," by Clara Weisman — an expert retoucher and, for many years, the head of the retouching-department of one of the largest photographic establishments in this country. The author is by training, experience and temperament well-fitted to treat so difficult a subject as retouching; and admirably, indeed, has she performed her task. Not only does she set forth, at once clear and concise, the principles of sane retouching and their application, but how to avoid the common error of spoiling a likeness and its anatomical aspect by senseless manipulations. She demonstrates the importance of truth in modeling the human face, and illustrates by means of examples the danger of falsifying the results of the lens. On the other hand, there are numerous delightful illustrations of genre and portrait-photography, exemplifying the best principles of the retouching-art which make for the artistic blending of truth and ideality. The author also illustrates how successfully an expression of gloom may be converted into one of happiness, and how other modifications on the negative may be effected by skilful use of pencil and etching-knife, urging only such technical manipulations as may be successfully practised by the retoucher of average ability, her one thought being the attainment of supremely artistic results by easy and sensible methods.

Although the author is a practical artist and a recognized authority in her specialty, she supports her advice with references to well-known art-principles, thus imparting to her words greater value and force. The closing chapter, "Style and Individuality," reveals the author's familiarity with the works of the great painters, and worthily terminates a volume that should be in the hands of every practical worker — professional or amateur. We accord it our heartiest endorsement.

The book is fully illustrated and only a few copies are left. It was published at \$2.50, but will soon be out of print. Copies will be sent by the Publisher of PHOTO-ERA on receipt of \$2.00 each.

Woodland-Portraiture

A VERY good point is made by R. M. F. in a recent issue of the *Amateur Photographer*. Those who see much amateur-photography are very familiar with the head-and-shoulders portrait, half white and half black about the face, the product of the drawing-room window and its over-harsh lighting. Why do those who have no studio — and who would fail miserably at portraiture from lack of understanding if they had — attempt effects of studio-lighting copied from the local professional? Their portraits would be more realistic, more true to the life and more generally pleasing, if they took the trouble to produce a simple portrait in the open air. The woodlands make an ideal studio for the photographer. By choosing the correct place fine lighting and modeling are obtained, a slight forward step or even a movement of the head often being all that is needed to produce the very finest possible effects. In fact, the light filtering softly through the gaps in the densely clad branches makes the woodlands nature's

own studio; and, moreover, by careful posing, the light is caught just right upon the face of the model to show up any desired feature to the very best advantage. However, one or two points will have to be guarded against, and perhaps the most formidable is spotty lighting; this is easily avoided by taking the model into a more open part of the wood. And again, without care being taken, the background is apt to prove over-assertive and to give trouble. With focusing-cameras having a lens of fairly wide aperture, say F/6.8, this is easily overcome by bringing the model well forward, and softening what is over-assertive by differential focusing, and when using a camera not so fitted a softly lighted part that will not challenge overmuch attention should be chosen. In fact, it may be said that the heart of a wood or glade is the amateur's ideal studio, and for beginners especially — bar none.

Lens Expedients

JUST now it is very difficult to purchase lenses of exactly the focal length and aperture that may be desired, and photographers will do well to remember that the drawing given by a lens depends not upon the focal length, but upon the distance between the lens and the subject. Therefore, the operator who is called upon to make a picture from a certain standpoint may use any lens which will embrace the desired angle. If it takes in more there is no harm done; all that has to be done is to enlarge just so much of the negative as will give the amount of subject required. This slight degree of enlargement is not enough to depreciate sharpness, and now that printing on developing papers is almost universal, enlarging takes little more time than making contact prints, especially if an enlarger of the vertical type is installed in the printing-room. This takes no more room than a printing-box, no pinning up of the paper is necessary, and strips or sheets of six or eight can be used if preferred. Another old dodge, when even the widest angle lens on hand does not take in quite sufficient subject, is to reduce the aperture of the diaphragm to F/64, or even smaller, and then to rack the camera in until the desired angle is obtained. With a very small aperture most lenses will give good definition on a plane half to three-quarters of an inch inside the usual infinity focus.

British Journal of Photography.

Change in Price of Aurora Life-Studies

THE well-known portfolio of Aurora Life-Studies, decorated plates measuring 9½ x 10 inches, comprising a total of sixty-three halftone reproductions, was sold at \$7.50 until lately. PHOTO-ERA has purchased the remaining copies of this publication and is now selling them at **\$5.00 net**, each.

The set of statuary poses, No. 300, composed of 12 6 x 10 direct photographic prints on heavy Azo paper, is now sold at \$4.00 net; but together with the portfolio of halftones, at **\$7.75**.

The above **\$7.75**, together with PHOTO-ERA for one year (\$2.00), total **\$9.75**, for **\$9.50**.

Keep The Ball Rolling

IN times like the present, the professional humorist may be expected to commit an offense like the following:

"Lizzie! Run quick to the drug-store with this prescription for your sick brother. And tell the man that Jim belongs to the preserves!" — *Photo-Era*.

"Also tell him that Jim has got to eat according to the doctor's regiment." — *The Camera*.

Next!

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No. 2

The Pocket-Camera for Pictorial Work

WILLIAM S. DAVIS



NOT so many years ago, all small cameras were looked upon as little more than toys, since such instruments were crude in construction and optical equipment; but all this has been changed by the variety of well-designed miniature outfits now available; and as a result of such improvements, together with simplification in enlarging-methods, there has sprung up an army of pocket-camera devotees who find the small camera most convenient to record snapshots. However, it is not this sort of work that I wish to consider now, so much as the adaptability of the small camera to the needs of the pictorial worker on occasions when a large outfit would be a burden or even impossible to use.

Since there are advantages and disadvantages connected with every type of apparatus, when looked at from the standpoint of universal adaptability, it is only fair to consider both in connection with miniature cameras as a class. In passing, I may say that in many instances it is rather a question of convenience in manipulation when dealing with certain classes of subjects. When in doubt what to do, a clever worker often will find a way to make the small camera do what is wanted, even though it is not so well suited to the purpose as some other type. Originality and skill accomplish wonders.

Naturally, the first and most obvious advantage of all small folding-cameras is their extreme compactness. It is possible to use one as a pocket-companion, and so obtain many transient compositions and effects which would otherwise be missed. Also, the fact they may be used without attracting much notice—a feature worth considering when taking street-scenes, or other studies where spontaneous grouping of figures

forms a part of the desired composition. Another is the greater depth of focus at the same relative aperture possessed by the short-focus lenses used as compared with those of longer focus needed by larger-sized cameras. Taking the figures as published in depth-of-focus tables, we find when a lens is set at the infinity point—i.e., the correct position



THE TEMPEST

WILLIAM S. DAVIS

for very distant objects—halving the focus approximately quadruples the depth at a given “F” aperture. Thus, in the table given in the “American Annual,” a lens of 4-inch focus—the maximum generally fitted to a $2\frac{1}{4} \times 3\frac{1}{4}$ camera—working at F/8 will give, when set at infinity, a sharp image of all objects from 17 feet, and one of 8-inch focus under the same conditions will only produce like results for objects over 68 feet distant. If the lenses are focused actually for these distances, then all objects from half the distance to infinity will be

in good focus for all practical purposes. On account of the increased depth possessed by short-focus lenses, they are more nearly "universal" in focus when used at moderate apertures than it is possible to obtain in larger ones, and if means for focusing-adjustment is provided, much larger working-apertures may be employed successfully, by using reasonable care, and still avoid disagreeable blurring in the parts not focused upon. One point should be understood clearly in this connection, and that is the fact that owing to the slight movement necessary to change the focus the camera must be precise in its mechanism, and no carelessness is allowable in setting the lens-front. Of course the value of this increased focal depth is quite apparent in all forms of snapshot-work where the distances of moving objects are changing constantly, to say nothing of being able to use a large aperture when the light is poor or a quick exposure is essential. Considerable stress is also laid frequently upon the possibility of getting a clear image of moving objects with a slower shutter-exposure, and although, to a certain degree, this holds true, it must be remembered that, when an enlarged print is the ultimate aim, the movement of image allowable in the little negative is very much reduced. Consequently, one has to work for a smaller "circle of confusion" than is permissible in a large negative used for contact-printing. Among other features which might be mentioned is the convenience with which a large stock of supplies may be taken on a trip, and the moderate cost of materials, since the greatest item with the average amateur who uses a large outfit is generally films or plates.

On the reverse side the main objections are — no opportunity to study a composition upon a



THE WHITE CHURCH

WILLIAM S. DAVIS

ground-glass screen; the impossibility of selective focusing with certainty to obtain some special quality of definition in the image, and lack of a swing-back for architectural subjects. However, the latter can be corrected during printing if the enlarger is fitted with a swing-adjustment for either negative or paper, since the convergence of vertical lines in a negative may be overcome in

the same manner that such lines are corrected when taking the subject with a swing-back camera. Selective focusing, I think, remains the main point with the pictorialist who enjoys manipulating special lenses, varying the size of stop, etc., for the purpose of placing emphasis upon a given part, or to produce some particular optical quality in the general definition. In the latter particular much can be done to change the character of the result when making enlarged prints.

In the selection of a pocket-camera, the mechanical pattern is largely a matter of individual taste, assuming, of course, that



SNUG FROM WINTER'S BLAST

WILLIAM S. DAVIS

the workmanship is good; but the pictorial worker who intends to use the instrument upon a wide variety of subjects should select a focusing-model. Personal needs will also dictate the form in which the sensitive material is used — whether roll-film, film-pack or plates. The latter are usually more free of minute blemishes, such as sometimes occur in the celluloid-base, or gelatine-backing, of films; but the greater convenience offered by films in the matter of daylight-loading and dispensing with separate holders is reason for giving them the preference in this case. In speed and chemical quality the standard brands are now very satisfactory in quality. Aside from the advantage of being able to remove individual exposures from the pack, I am inclined to favor the roll-film more especially, because exposures can be developed in the strip — thus minimizing the risk of marring in manipulation — and the fact that there is less liability to present an uneven surface to the lens if the film happens to absorb considerable moisture while in the camera. As to size, $1\frac{1}{2} \times 2\frac{1}{2}$ is the smallest deserving of consideration where fairly large finished pictures are the aim, and all things considered, $2\frac{1}{4} \times 3\frac{1}{4}$ seems most desirable, for although cameras of this size are sufficiently compact, the negatives produced are large enough to allow the selection of only the best parts to enlarge. If one is interested in lantern-slide making, these negatives are nicely suited to contact-printing upon standard-size slides.

The lens and shutter are two of the most important features when small negatives are made.

An anastigmat certainly possesses the advantage of giving a perfectly flat field at full opening to the extreme corners of the negative; and if the more expensive types are chosen, the increased working-aperture offers reserve power in the way of speed. However, if for any reason it is not desired to make a heavy investment, excellent results can

be obtained with a good R. R. lens working at F/8 — for the definition will meet ordinary requirements for enlargements of several diameters, and the speed is sufficient for the range of subjects usually selected for pictorial treatment, especially if a grade of extra sensitive film is used. To get the most out of a lens of limited aperture one should have a shutter giving a good range of slow speeds, and I regret to say many manufacturers fail to provide for this. Many otherwise good equipments of moderate price are fitted with shutters giving only one or two automatic speeds. The best usually obtainable with R. R. or medium-priced anastigmat-lenses are arranged to give $\frac{1}{25}$, $\frac{1}{50}$, and $\frac{1}{100}$ second, in addition to time and bulb exposure. The type of shutter giving automatic exposures from 1 to $\frac{1}{100}$ second, such as is in general use on

larger outfits, seems to be unknown in the smaller sizes. Consequently, if one wishes something better, it is necessary to make the jump to a high-priced pattern like the "Compound," giving various speeds to $\frac{3}{100}$ — the last not often needed except for special kinds of work. However, a few manufacturers are supplying shutters which give a choice of exposures rated from $\frac{1}{10}$ to $\frac{1}{100}$ second. The advantage of hav-



CHINESE LILIES

WILLIAM S. DAVIS

ing one or two slow speeds quickly becomes evident in practice, since it often renders possible the making of snapshots in the hand when the lighting is weak, and under favorable conditions a light ray-filter may often be used without having to depend upon a tripod and time-exposure.

Several accessories should go into the kit, especially when traveling, there being no good reason why the same care should not be taken to obtain the highest possible technical quality in the making of miniature negatives as in the larger ones. A ray-filter — about 3-times grade

— should certainly form a part of the outfit; but when fitting one, the effect should be observed by removing the back of the camera and focusing upon a piece of ground-glass laid against the film-rollers, because the focus of the lens is usually slightly altered — making it necessary to place an extra marking upon the focus-scale. Should a direct-vision finder not accompany the camera, it will prove of advantage to add one. The simplest form, composed of a metal-frame in front with a sight-guide the proper distance in the rear, is the best; and it may be made at home by any one handy with tools. The next best, in the way of a substitute, is a "view-meter"—easily made from cardboard — which is just a cut-out with a guide of sufficient length hinged to it so that when held to the eye the exact amount of subject-matter included by the lens is seen through the opening. This is a simple matter to arrange if the opening in the card is the size of the picture, and the guide-arm the same length as the focus of the lens. After studying a scene directly through such a meter, it is easy to locate the main features correctly in even the smallest reflecting-finders commonly fitted to pocket-cameras, though it is well to include a bit more all around than is really wanted to guard against error, and to allow some leeway for trimming or selection. A telescopic metal-tripod is useful at times, more especially when making interiors or very near objects, and a supplementary lens — so-called portrait-attachment — may even come in handy if the focusing-capacity of the camera is limited; for with one, it is possible to make small still-life compositions, or even to do copying, providing an accurate scale of distances and focal adjustment has been worked out and tabulated in advance. Since accurate measurement is essential to be sure to get a sharp image at close



AUTUMN-FIELDS

WILLIAM S. DAVIS

range, a small tape-line, or length of cord knotted at six-inch intervals, is sometimes handy.

In the manipulation of a small camera for pictorial ends, those who have been accustomed to working by visual observation of the image upon a focusing-screen with the purpose of getting in the negative just the quality of definition desired in the finished picture will have to modify their procedure. The same care can be, and should be, exercised to select the point of view, not forgetting such changes as are caused by variations in the height of the lens, which is especially important in studies of animals and figures at close range. This is one reason why both direct-vision and reflecting-types of finders are handy, since they make it easy to use a camera at different heights when held in the hands. Those who find it confusing to separate the essential material for a picture from its surroundings should use a direct view-meter or finder to define the boundaries when the subject is such as to permit of preliminary study.

As any focusing must be done by scale, there is little choice but to obtain as sharp definition in all planes as possible, the only exception being in the case of foreground-subjects well separated from receding parts, when it is possible to show, if desired, considerable differentiation of definition, the size stop used regulating the amount, together with the point focused upon. Naturally, the greatest softness in the distance is obtained when the lens-pointer is set on the focus-scale for the nearest object of importance in the foreground; but, on the other hand, when the maximum depth-of-focus throughout is wanted, the lens should be set at the infinity-position for such scenes as open landscapes, marines or any subjects wherein the main features are over twenty-five feet away. If it is a general view

containing features of interest as near as twelve to fifteen feet — many street-scenes, for example — the greatest depth of sharp definition obtainable for both these and more distant portions of the subject will be obtained by setting the lens at about the twenty-five feet mark on the scale — in other words, applying the rule expressed in tables of hyper-focal distances. On the same principle, when making an interior or still-life group, the best compromise in focus is obtained by measuring the distance respectively, from the lens to the nearest and furthest details of importance, and then setting the lens about a third of the difference between them in advance of the nearest. For example: If the minimum measurement is six and the maximum twelve feet from the lens, we would take one-third of the difference — two feet from six — and set the lens at eight feet on the scale. However, when the depth of field included is great, it is always well, whenever possible, to use a small stop to guard against unpleasant blurring of the image — say F/16 or F/22, as the depth of focus varies with the size of opening as well as with the length of focus of the lens employed. For this reason the figures I have named above are merely approximate for the average pocket-outfit; but being on the conservative side, they will be a safe guide, even with lenses of the largest working-aperture usually fitted to high-grade cameras.

Harsh gradations and blank spaces devoid of any tone-value are to be avoided, since such defects in technique are much emphasized in enlarging. Therefore, full exposure is very desirable; and in judging the time, take into account the *scale of contrast* in a scene, rather than the general impression of luminosity. When abnormal contrasts are present, allow more than a so-called normal exposure. As such contrasts are often due to color as well as to tone, a ray-filter is frequently of assistance to preserve tonal values in the lighter parts and to improve the picture.

In developing, avoid forcing. The ideal negatives are those that contain many delicate gradations, but soft in general effect and moderately thin, so that whatever light is used to enlarge will penetrate all parts but the *extreme* highlights. The employment of dilute solutions is a help in this direction, and many authorities claim a finer deposit of reduced silver is also obtained. This is worth consideration, because the limit of enlargement is often determined more by the grain of the negative than the lack of sharpness in the definition given by the lens. Given a really good negative as a basis, it is hard to fix a hard and fast limit to the degree of enlargement possible with pleasing effect, since a good deal depends upon whether sharp or diffused-focus effects are desired. Four or five diameters are entirely within bounds without an appreciable loss of definition when prints are viewed at normal reading-distance. For pictorial reasons it is often desirable to soften the result in some degree, or otherwise to change the final effect, and among the means available the following may be mentioned, assuming that an enlarger of adjustable focus is used to print. Racking the lens slightly out of perfect focus. Employing one of the "soft-focus" variety of lenses instead. Placing a screen of "bolting," or other fine cloth, stretched on a frame in front of the paper during all, or a part, of the exposure. Covering the paper with a sheet of fine ground-glass — ground side out. Such methods, combined with the variety of textures in which bromide and rapid gaslight paper can now be had, give wide scope for experiment; but if still more is desired, a transparency may be made by contact upon a lantern-slide plate, and from this an enlarged negative upon either a slow plate or thin bromide-paper. Such negatives allow scope for local treatment, besides permitting the use of such processes as gum and carbon, which can be worked only by contact-printing in daylight.



"TAKE BACK YOUR GOLDEN FIDDLES AND WE'LL BEAT TO OPEN SEA"—Kipling

F. M. SUTTER

The Mirror-Studio

ARTHUR PALME



HAVE you ever noticed how nervous, especially elderly, people get when they come to you to sit for their portraits? How glad they are when you leave them alone for a while to fix themselves up before your dresser? How they make a last attempt to righten their hair; arrange their curls; pull out the edge of the handkerchief a little more; push back their cuffs, which come out too far? And then you are back again, suggesting poses which they never wanted; railroad your camera forth and back; rack out bellows; reverse, maybe, the ground-glass for a high picture, and a hundred other manipulations.

To the average sitter, all these things are new, and must arouse his attention. He forgets the chief purposes of his coming to you. Ladies, with their born lack of technical interest or understanding, follow these manipulations only on account of their curiosity, getting at the same time more confused every moment. Not knowing what all those funny stunts mean that you perform, your sitter will be awakened suddenly by your kind request: "Now, please"— "Oh, gracious, wait just a moment"— and there she goes again, pulling here and there— well, you know all that. It requires the patience of a Job and the diplomacy of a Richelieu. When the finished product is presented, and the facial expression has passed the sitter's censorship, you will no doubt have heard frequently: "I could have arranged that if I could have seen myself in a *mirror*." "THAT" can mean any (to you, apparently) minor detail in the garment.

Several years ago, during the good old peacetime, when the crossing of the ocean did not require more heroism than a railroad-ride through Rhode Island, I came, in Europe, to a studio the equipment of which was so radically different from the common type of atelier that I thought it might be of interest to some readers.

To begin with, there was no camera at all in the studio; or, better said, I could not see any. There was a plenty of daylight, both side- and sky-light, and, in addition, a number of high-power incandescent lamps, diffused by some kind of light-blue shaded material that did away with any offending glare. The entire room was filled with a strong yet mellow bluish-white mixture of day-and-artificial light.

One side of the room consisted of a very large glass plate— I should say about 12 by 18 feet. I did not know at first what was behind that

glass; it appeared pitch black, and acted as an excellent mirror. After agreeing upon the desired size of the portrait (full figure, bust, etc.), the majordomo brought along a desk and a chair, and asked me to try out different poses, always before the large mirror. "When you come to a position which you like, arrange everything on you as you would like to have it, give a signal with your hand and hold still just for a second." Then he disappeared. I was left alone in the studio. Presently, I started to make things on me look human, looking all the while in the mirror, waved with my hand (I did not know to whom) and froze up for a second. An instant later the photographer came forth again, thanking me for the opportunity. The picture was the best and most natural portrait that I ever had taken of me. Of course, my photographic inside revolted against such an unexplained mystery; and after confessing to the maestro that I was a craftsman of his, although only an amateur, he told me and showed me all desirable details.

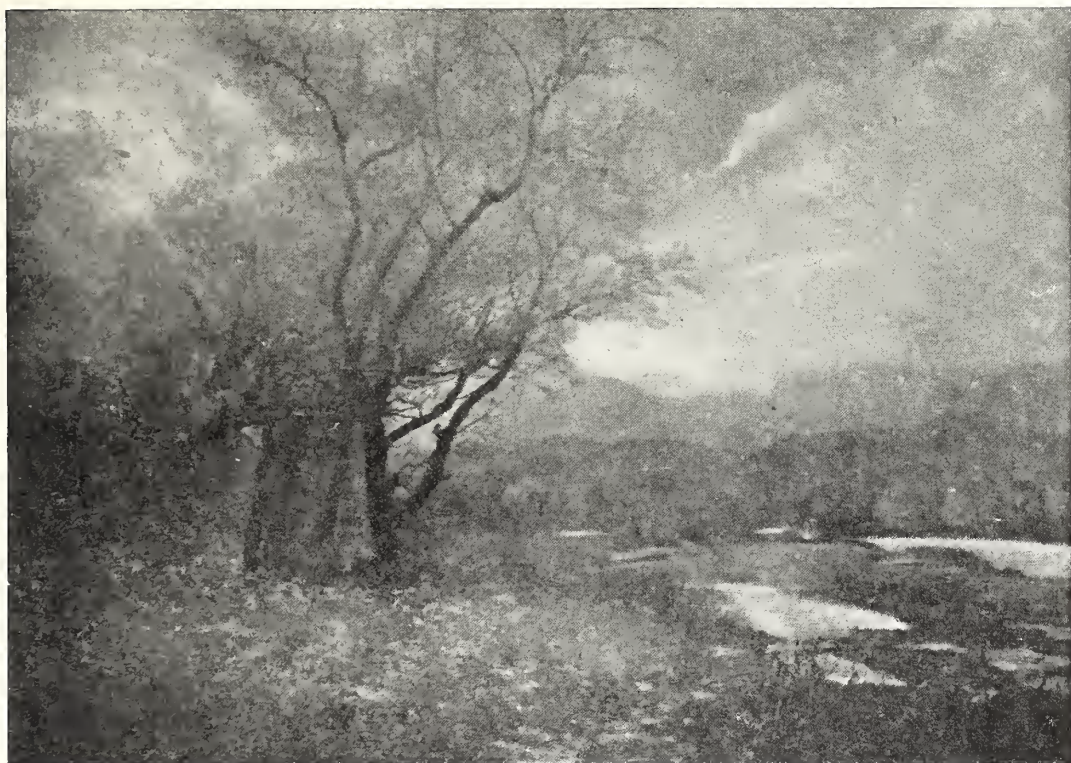
Back of the large glass plate was a room about 18 by 18 feet. The walls, the ceiling and the floor of this room were completely covered with dead-black wall-paper, and there was no window in the room. A standard studio-camera stood in the middle of it, all the metal parts of which had a black finish. The picture was taken through the glass plate, which was kept scrupulously clean. The strong light in the studio was thus completely reflected on account of the entire black studio.

If the sitter should so desire, the photographer stays with him in the studio. Everything is set ready for the exposure in this case in the studio, and there is a long hose going through the wall, ending in a rubber-bulb in the photographer's hand, so that the exposure can be made from the sitting-room very conveniently.

The readers may consider the many possibilities and features of this excellent arrangement. Just like a reflecting-camera: you can see yourself to the last moment. The photographer claimed this studio as his own idea.



THERE is one rule, at least, which must never be broken—the rule which says "Thou shalt not paint two pictures upon one canvas;" for the house which is divided against itself inevitably falls to the ground.—BURGE HARRISON. This is good doctrine and applies to all art in the flat—painting, etching and photography.—[EDITOR.]



SPRING-SHOWER

WAKABAYASHI SHUNKO

Pictorial Photography in Japan

CHARLES HOVEY PEPPER

THE Tenkyu-kwai, a small body of amateur-photographers, at Osaka, Japan, have issued examples of their work in an exceedingly attractive form. Each photograph is on a dark mount fitting the tone of the print. All are enclosed in an attractive and substantial portfolio and fastened with ivory pins — a touch of taste, good work and elegance which characterizes so much that is Japanese. In this art, as in all art which comes from Japan, we expect much. This country produced Scishiu and Masanobu and Motonobu, the founders of the Kano school, whose works — discolored by time, as many are — yet bring their message of subtle poetic feeling, breadth and virtuosity of handling, and distinguished elegance.

From Japan came the art of Hok'sai, Haranobu Shunyei, Kiyonaga, Shunsho and that king of landscape-artists, Hiroshige. He has taught artists and laymen, the world around, the

beauty of the rainy day, and the silence and majesty of a snow-covered earth. He has shown that there is scarcely any place which may not be turned to the artist's use. Paddy-fields, with their checkerboard-dykes, long Cryptomeria avenues, bare hills, river-banks, tops of houses, rushing rapids, crowded streets, boats, bridges, warehouses, fireworks on the night-sky, men, women, horses, dogs, he greedily takes for his own, and gives to us, after a hundred years, with a grip and freshness that are startling. We have much to learn from these wonderful people, who do so well whatever they do.

If it is preparedness, of which we tardily concern ourselves, we have to recall the quiet and effective preparation for the Russian war. I was in Japan while that preparedness was at its height, shortly before the war broke. There was more action than diction.

Perhaps no country, handicapped by old customs, lack of wealth and people, ever prepared



NOVEMBER-DAY
YOSHIDA YUHO



to do battle with so rich and populous a country with so quiet and patriotic a determination. Probably no nation ever bought more navy and more army of the most modern and efficient type for the money than Japan. Nor was the valor of the soldiers greater than the patient fervor of the people who shouldered and are carrying the war-debt. For centuries, an agricultural people, they grasp the fact that by industries they must make their place in the world, as did England. They studied systematically the problem, and set to making things — cotton, silk, carpets, hats, umbrellas, watches, electrical appliances, ore-products, guns, munitions steamers, men-of-war. Nothing daunted them — they do all well, and reach out not only to Eastern but to Western markets.

I recall an anecdote of a young Japanese who had spent much time in Germany mastering the blanket-industry. He returned to his own country as agent for the German firm. Some time later, when the trade had been falling off, he wrote, in reply to an enquiry as to the reason, that the German firm would be glad to know that he had formed a stock-company and was producing a very satisfactory blanket; however, there was one process in the finishing which could be improved, and would they kindly furnish the information. This independence is characteristic of the Japanese.

One sees curious signs over shops, such as Ladies' Outfitter, over a dress-maker's place; Extract of Fowl, over an egg shop; Head Cutter, over a barber-shop. The owners of these shops spoke some English. They had American and English friends to whom they could have gone for help; but they relied on themselves and went ahead on their own initiative.

A beautiful country, peopled by an energetic, industrious, patriotic, brainy folk, is Japan. Be one artist, merchant, writer, boiler-maker or diplomat, seeing the people each from a different slant, he comes away impressed. It is well that these Osaka artists put on the sensitized film this land, so that we who know something of it and we who do not may share its beauties.

The photographs in question were received, without any data, by the Editor, except a note which set forth the origin and aims of the photographic club — Tenkyu-kwai — and which, in its quaint and direct simplicity of expression, reflects the character of the Japanese people and their art. It is as follows:

"The Tenkyu-kwai is a small body of amateur photographers at Osaka. It was founded in November, 1912, and humbly purports to contribute its quota to the progress of pictorial pho-

tography during the New Era of *Taisho*.

"The promoters were nine in number, namely: Messrs. Wakabayashi Katsuji, Kajiware Kenkichi, Yokoyama Fukuzō, Yoshida Yoshitarō, Sotoku Tsunesaburō, Kometani Tomizō, Aoki Chuzaburō, Ashida Gentarō, and Mori Ippyō, and after the death of Mr. Aoki, Mr. Kiriya Seiji took his place, but soon retired, so the members are now reduced to eight.

"The object of this club is to make pictures by photographic process. But the members do not intend to follow any set rules determining the style of their productions. The one principle that unites them all is perfect freedom of process. Each one may make pictures in the way that best suits his fancy and taste without being fettered by any conventional rules.

"We have bravely resolved to bring this little album before the public, even though it may be feared that the effort of three long years has not yet been crowned with proportional success. Yet were we obliged to wait before publishing the album until our art should be so perfect as to be able to silence all adverse criticism, we would most probably never have the opportunity of making any publication at all.

"In general, the members work with pictures drawn by Japanese, Chinese, or European masters before the eye for reference. But while making steady progress in the knowledge of the pictorial art, the mind chafes more and more under the inconvenience of photographic manipulation and can hardly ever finish a picture without a deal of irritation. Whether, in such circumstances, it will be possible to continue this publication in the future is still an open question; anyhow, the authors will try to give out one album per year."



It is marvelous that such a large proportion of intelligent men, with ample wealth, are content to fritter and wear away their lives in cities, where the glories of the heavens and the earth, the rising of the morning sun, the charm of each opening day, are so seldom seen; of the sweet songs of birds, the moist fresh earth, instinct with life, the glow and shadows on the mountains; at night, the firmament o'erspread with wondrous light; the wind in the forest, the oncoming clouds, and the thick darkness — of all these, and the voices they have for us, they know almost nothing. — CHARLES N. GILBERT.



It is now just the top of spring with us. The whole country is mad with green. To see the cherry-blossoms bitten out upon the black firs, and the black firs bitten out of the blue sky, is a sight to set before a king. — R. L. STEVENSON.

Stains on Negatives and Prints

Their Cause and Their Cure



AMONG the numerous negatives and prints submitted by amateurs for criticism to the correspondence-school of the Eastman Kodak Company, quite a large percentage of them are stained. With a view to preventing this the company has devoted much attention to the subject of stains, and the following methods and formulæ for their removal are a result of work carried out in the Research Laboratory at Kodak Park.

Stains may be due to several causes, and vary accordingly in their nature and color. Thus, we may have red or blue ink stains, iron stains, pyro and iron stains, silver and diehroic fog stains, oxidation stains and others less common. Since yellow stains are most frequently met with, we will deal with them first.

The two commonest yellow stains in photography are oxidation and silver stains. Oxidation stains are caused by oxidation of the developer by oxygen from the air. Thus we may have Elon, Pyro, Hydrochinon and other developer stains, which may be either local or general.

Local stains are the result of careless handling of the negative or print, being caused by incomplete immersion in the developing- or fixing-solutions. A slight curl of the film or print, or too many films or prints in one tray, will leave some part of the surface exposed to the air, oxidation will take place and a yellow patch will appear the size of the portion of film or print exposed to the air.

The necessity of completely submerging the films or prints in the solutions is obvious, and after being placed in the fixing-bath they should be moved about. A precaution that is a great trouble-saver is the use of an acid stop-bath between developing and fixing. The effect of this is to neutralize or destroy the effect of the alkali in the developer that is carried over in the film, thus reducing the tendency of the developer to oxidize.

There is also a danger that if the acid fixing-bath becomes neutralized through the carrying over of alkali from the developer, stains may be produced. It is therefore a wise precaution to add further amounts of liquid hardener to the fixing-bath at intervals, to make sure that it remains acid.

Local yellow stains produced in this way act just as if pieces of yellow filter were placed over the negative, and the image produced will be

weaker in those places where the stain is present, hence the necessity of avoiding or removing it.

General oxidation stain extends over the entire surface of the film or print, and is caused by the use of an old or discolored developer, or by a developer not containing a sufficient amount of sulphite. Pyro will give this stain, especially if the solution has been allowed to stand for any considerable time before use. In cases where the general stain is uniform it will have no other effect than to prolong the printing-time of the negative.

In the case of a pyro-developed negative, in addition to the slight general yellow stain above, there is usually a yellow stain image present along with the silver image, the presence of which may be revealed by removing the silver image in a bath of Farmer's reducer. This image is an oxidation product of the developer produced in those places where the metallic silver is formed during development. This oxidation stain has the effect of increasing the contrast of the negative, and explains the fact that a thin-looking pyro-developed negative will often give a contrasty print.

The other common stain that is likely to occur is silver stain. It is difficult to distinguish this from oxidation stain by ordinary observation. Like the latter, it can be either local or general, and it arises from one or several of the following causes:

(a) The first cause is the use of an old and exhausted fixing-bath, containing an undue amount of silver in solution. If the film or print is not sufficiently washed, some of the silver salt remains. This is colorless, but is changed to yellow silver sulphide after some time. This first cause is easily prevented.

(b) Incomplete Fixing. This can occur even with a new bath if the print or film is taken from the bath too soon. While the plate is fixing, the silver halide in the emulsion changes first to colorless silver thiosulphate, which is comparatively insoluble. At this point the milkiness of the plate or film disappears. By leaving the plate in the bath this soluble and colorless compound is changed to a more soluble double thiosulphate of silver, which can be easily washed out. When the film is removed from the fixing-bath immediately after the milkiness has disappeared — the first stage of fixing — no amount of washing, later, will remove the insoluble silver salt, and this will in time be changed to yellow silver sulphide stain. The only safe rule is to leave all prints and negatives in the fixing-bath for double



MORNING AT THE RIVERBANK

KOMETANI KORO

the time required to reach the end of the first stage, which is marked by the disappearance of the milkiness.

(c) If prints or negatives have not been completely covered while in the fixing-bath, they may appear completely fixed; but in spots they may have fixed only as far as the first stage, with the result that on exposure to the air yellow stains will appear.

Local silver stains may be caused by leaving a negative in contact with damp solio paper. This paper contains a soluble silver salt which is more or less absorbed by the negative and produces the stain.

When using solio paper, care should be taken to see that the paper and the negative are perfectly dry. When there is a possibility of the negative and paper being in contact over-night, owing to failing light, a sheet of Kodaloid (thin celluloid) should be placed between them before exposing.

As previously stated, it is difficult to detect slight silver stain in the presence of oxidation stain by observation. While a stain may be either pure silver stain or pure oxidation stain, it is

more likely to be a combination of the two.

From the above it is evident, therefore, that yellow stain may consist of one or more of the following compounds:

Metallic silver, silver sulphide, silver thiosulphate, silver photohalide, together with an oxidation product of the developer.

Removal of Yellow Stain

There are two methods of removing the stain — (a) chemically, (b) photographically.

When treating a mounted print, it should first be soaked in water and laid face down on a sheet of paper and the mount pulled away from the print — not the print from the mount, or the print will be torn.

Oxidation stain may be removed by bleaching the silver image to silver chloride, and redeveloping, this process, incidentally, removing the stain. In the case of both film and prints, it is a wise precaution first to harden them in a 5 percent solution of formalin, and wash, otherwise the gelatine is apt to soften and frill during the treatment. The permanganate bleach is made up of the following two stock-solutions:

	A		Metric
	<i>Avoirdupois</i>		
Potass. perman- ganate	64 grains		4.5 grains
Water	32 ounces		1 liter
	B		
Sodium chloride (table salt)	5½ ounces		160 grains
Sulphuric acid (strong)	1 ounce	160 grains	40 e.e.
Water	32 ounces		1 liter

For use, take two parts of water and one part of B, and to this add one part of A.

A 5 percent solution of hydrochloric acid can be used instead of solution B; but as it is often of uncertain strength its use is not recommended. A point that must be observed in the mixing of the solutions is that the stock-solution A *must* be added to the diluted B solution, that is, one part of A must be added to the combined two parts of water and one part of B. If the stock-solutions are mixed before B is diluted, chlorine gas will be given off. When the solutions are mixed as directed, chlorine gas is not liberated, but remains in solution and converts the silver image into silver chloride, which is wanted.

The solutions A and B keep well if kept separately, but not when mixed, and for this reason the bleaching-bath should be prepared as required.

When preparing the solution A, be sure that no particles of undissolved potassium permanganate remain, or they will give trouble in the way of spots and blemishes in the negative.

The bleaching should be complete in about three or four minutes, after which the negative should be rinsed and put into a weak solution of sodium bisulphite, rinsed and developed in a *strong light* (daylight, if possible) with an ordinary developer, say Nepera solution one part, water four parts.

In the case of a pyro-developed negative, the image of which consists partly of a silver and partly of a pyro stain image, the above process removes the stain image entirely, leaving a pure silver image, the process therefore being equivalent to reduction. By using a weak pyro redeveloper, much of the original stain image may be re-formed, though, incidentally, considerable general yellow stain is produced at the same time.

Silver Stains

If silver stain is treated as above, it will not be removed, but will be changed to metallic silver, and a black deposit will take the place of the yellow stain.

When a negative or print is stained, and it is decided to attempt its removal, it is a good plan

to find out by a preliminary test just what particular variety of stain you have to deal with. This is done by cutting a narrow strip from the edge of the stained paper or film, and bleaching and redeveloping as described above. If the stain is removed entirely, it is pure oxidation stain, but if it is replaced by a black deposit, it consists more or less of pure silver.

Whenever silver stain is present, it is a much safer and better plan to remove it photographically.

The following method of removing stains by means of color-sensitive plates and light filters is taken from *Studio Light*, February, 1917.

"This special use we have in mind for a panchromatic plate and contrast-filter is for reproducing valuable negatives that have become so badly stained that they are useless for printing.

"Negatives become stained in various ways, and sometimes these stains cannot be removed by a chemical treatment without injuring the silver image. It is useless to try to print from them, but it is a very simple matter to reproduce them, provided the chemical that made the stain has not removed a portion of the silver image, and this is not often the case.

"A positive made through the strong Wratten 'G' filter on a panchromatic plate will show no trace of the yellow stain. It is then a simple matter to make a negative on a Seed 23 plate from the positive, by contact, if the positive is of the desired size.

"Filter-film is not expensive, but care should be used in handling it. It is stained gelatine stripped from the glass-support on which it was coated, and without a support it must be kept absolutely dry to retain its form.

"On the other hand, an enlarged, reduced or full-sized positive may be made in the enlarging or reducing camera, in which case a piece of filter, only slightly larger than the diameter of the lens mount, will be required."

Apart from yellow stains, we may have brown iron-rust stains, or bluish stains caused by the action of pyro on such iron stains, though these are usually removed during the bleaching- and developing-process above, as are likewise stains due to most aniline dyes, and red and black writing-inks. In the case of some samples of red ink, a slight trace of stain will remain after such treatment, in which case its effect may be removed photographically.

Although the article in *Studio Light* makes particular reference to the "G" filter for removing yellow stain, any colored stain may be dealt with in a similar manner by a suitable choice of filters, so that on viewing the stained negative or print through the filter, the stain becomes invisible.



LABOR
KAJIWARA KEIBUN



SPRING-SEA

YOKOYAMA KINKEI

Another form of stain, rarely met with, is dichroic fog, which appears yellowish green on looking at the surface of the film, but pink when looking through the negative. This stain consists of particles of colloidal silver, and is caused by underexposure and forced development of rapid plates or film with a developer containing hypo, ammonia or an excess of alkali or sulphite, that is, a solvent of silver bromide, or the use of a weak fixing-bath or one containing an excess of developer.

Anything which tends to increase the solubility of the silver bromide in the developer, such as an increase of temperature, tends to increase the amount of fog likewise. The stain may be removed by an application of a weak solution of Farmer's reducer, or a dilute solution of potassium permanganate with the addition of a few drops of sulphuric acid. This will be effective only if the stain is more readily attacked than the silver image, so that if the stain is of long standing, the slight reduction of the negative is apt to take place.

While oxidation stain is being removed by the

above bleaching- and redeveloping-process, any drying-marks left on the film or plate, caused by too rapid drying, will disappear also.

Another advantage in the use of the bleaching- and redeveloping-method is that it affords an opportunity for intensification and reduction. If the negative from which we wish to remove stain is weak and thin, we can, in the redeveloping-stage of the stain-removing process, redevelop with a solution of sodium sulphide. If, on the other hand, the negative is too dense, by cutting down the time of redevelopment and subsequently fixing we can effect any degree of reduction. In this way we can make two improvements to our negative by the one operation, and if the negative happened to have any of the other stains mentioned above, we accomplish several improvements with one effort. The above methods of stain-removal may be applied to the removal of stains from sulphided prints also.



It is art and science alone that reveal to us and give us the hope of a loftier life.—*Beethoven*.

Burson Tries Psychology

MICHAEL GROSS

IN red bold-face type, the head-line of the circular asked the presumptuous question: ARE YOU A SALESMAN OR AN ORDER-TAKER? This was followed by a brief sentence to the effect that eighty percent of the men who were paid to sell goods merely went around taking orders. But the remedy was now at hand, the next paragraph proclaimed. For thirty dollars, payable five dollars down and the balance at your convenience — meaning, no doubt, whenever the collector caught you in — any one could learn all there was to know about scientific salesmanship: character-analysis, and the way to reach a customer's mind.

Burson had received similar letters in the morning's mail before, but, priding himself on the fact that their message did not apply to him, he had consigned them to the waste-basket. Now, however, coming as it did so soon after the disastrous Shevling episode, the blatant head-line of the circular struck home. Was he really only an order-taker? Burson reflected. Surely a real salesman would never have permitted a man like Shevling to get on his nerves, and would also have known better than to deliberately antagonize him. No, he was not a real salesman, was his final decision, and the quicker he subscribed for the course and learned how to be one, the better it would be for the firm of Burson and Condit.

Accordingly, when Art came in a little later, Burson flipped the circular across to him and said, "That came in the morning's mail. Art. Read it and see what you think of the proposition."

Art glanced through the text and then tossed it back, with the one word "Bunk."

"I don't agree with you there," Burson said. "I think if I had the knowledge that course gives a man you would never have lost Mr. Tomlin's order, because I would have known how to handle Shevling. Just listen what you get for your thirty dollars;" and he picked up the circular and commenced reading: "Once having mastered this course, you will be able to know, even after the first casual glance, the thoughts that are in your customer's mind; you will be a keen judge of character and learn how to read a man's face like an open book; you will learn to judge by a man's features just how he should be handled, and last, but not least, the great secret of how to extract an order as quickly and as painlessly as possible will be taught to you. Isn't that worth the moderate price charged?"

"It surely is," agreed Art, "if you really get it."

Burson hastened to assure Art that, once having signed up for the course, he would see to it that he got all that was coming to him, and it was finally decided he was to subscribe and be converted into a master-salesman, after which, if the cure was complete, Art would also take the course.

However, it was not until he had taken the eighth lesson that an opportunity came up for Burson to show what his studies had done for him. Art came in at the end of a particularly dreary day, threw his package of samples in a corner, and sat down on one of the benches, the very picture of despair.

"What's wrong, Art, old man?" Burson inquired sympathetically, looking up from his job of squeezegeeing a batch of prints onto a ferrotype plate.

"Everything is wrong!" Art exclaimed despondently; "I've been trying to get an order out of Mr. Evers of the Evers-Dunning Company for the last month, but I don't seem to be able to size him up right. No matter what price I make on a job, that fellow Graves, of the Aeme Studio, always takes the order away from me. Mr. Evers has given me a chance to figure on another order, but what's the use. Graves will land it, and all I'll get for my pains will be a polite little note thanking me for submitting my prices."

Burson stopped working his roller for a moment, and stood, with knitted brows, wrestling with the problem. Then, as a solution came to him, he leaned across the table and said: "If your not being able to size Mr. Evers up right is the only thing that prevents you from getting an order, you've given me just the opportunity I've been waiting for — to meet some man who is hard to size up. Let me take a shot at this Mr. Evers. Even with the little knowledge of scientific salesmanship that I've already gained from my course, I ought to be able to read him like an open book."

Art brightened up perceptibly. "That's a good idea," he exclaimed enthusiastically. "You get into Mr. Evers' good graces, and then we'll quote such a low price on this order that he will be glad to give you the business. And once we get in," Art went on grimly, "it will take dynamite to blast us off again."

"Suppose we throw in the negatives free and

just charge for the prints," Burson suggested; "we can easily make up our initial loss on repeat-orders, and the Acme people, confident that, having beat us so often, they can easily do so again, will quote regular prices and consequently be a mile high."

"Just the thing," Art said. "I'm beginning to think the money you are spending for that course is n't such a bad investment after all."

The next day Burson brought his text-books to the studio and spent all morning brushing up on his lessons. Art had said that the best time to see Mr. Evers was about twelve o'clock, and so, at half-past eleven, Burson hastily skimmed through lesson eight, wrote out the estimate he was to give Mr. Evers, and, grabbing up a few samples, hurried out.

He arrived in the outer offices of the Evers-Dunning Company about a half-hour later and gave the girl at the desk his card to take in to Mr. Evers. In a few moments she came back and said that another salesman was already waiting for an interview, but, as Mr. Evers expected to spend at least an hour with the first man, he would see Mr. Burson at once, provided his proposition would not take very long. Burson told the girl to say that all he wanted was five minutes of Mr. Evers' time, and in a moment she came back and said he could go right in. "Mr. Evers' office is the last one on the right-hand side as you go down that aisle," she directed Burson, pointing out a passageway at the other end of the room.

Burson walked down the aisle and into the office she described, where he found Mr. Evers nervously pacing up and down the room, evidently about to go out, for his hat and gloves were lying on a chair, and the flat-top desk in the corner was clear.

Mr. Evers stopped and looked up as Burson entered, which gave that student of psychology a good chance to study the features of the man he had to sell and discover the kind of individual he was. He now saw that Mr. Evers belonged to the Dolichocephalic type; this discovery, coupled with the fact of his being of a high-strung temperament, as evinced by his nervous pacing of the room, meant, according to Burson's text-books, that the best plan of approach was to present his proposition in bald facts, leaving out all superfluities and fancy flights of persuasive language. Mr. Evers' type, according to lesson eight, detested formalities. They were best pleased when a salesman eschewed the "hellos" and "how are you, old mans" and came right to the point.

His plan of attack being decided upon, Burson walked directly up to Mr. Evers, and handing

him the estimate said: "My name is Burson, of Burson and Condit. We want an opportunity to show you the quality of our work, and, to make the experiment worth while to you, we are willing to throw in the negatives on this job absolutely free of charge. We are also quoting exceptionally low on the prints, as you can readily see when I tell you that our price for the complete job will be only eighty dollars. I hope you can see your way clear to tell us to go right ahead." Burson ended up hopefully.

There was a long pause. Finally Mr. Evers cleared his throat and said, "Of course, Mr. Burson, while I appreciate your coming in here and telling me just the thing I've been wanting to hear, still I don't see how the whole subject concerns me at all."

"Why! Is our price as high as all that?" Burson asked in surprise, thinking the words were meant in sarcasm.

"I'm sure I don't know," was the answer; "you'll have to ask Mr. Evers."

"Are n't you Mr. Evers?" Burson almost yelled. "Then what are you doing in his office?"

"I'm not Mr. Evers," came the calm reply, "and this is not his office. This is the waiting-room, and my name is Graves, of the Acme Studio. Mr. Evers' office is the last one to the right side of this aisle, not the left, and I'm waiting for him to get through with another salesman before going in to see him. I wanted to stop you," he went on more kindly, noticing the crest-fallen expression on Burson's face, "as soon as you told me who you were, but you blurted out your proposition so fast, I didn't get a chance. Do you always sell goods by rushing up to a man without greeting him by name or saying 'hello,' and then firing your proposition at his head? If you do, you ought to take a few lessons in salesmanship."

Burson did not dare tell him that "lessons in salesmanship" were just what had made him shoot off his proposition in one breath, and that if his head had not been so full of Brachycephalic and Dolichocephalic types, facial characteristics and scientific salesmanship, he would, perhaps, have had sense enough to tell the right side of the aisle from the left. So he said that his rush was due to the fact that he was not feeling well, and had wanted to get out into the open air as soon as possible. Then, to make the "bluff" good, Burson had to turn around hurriedly and walk out. He was even glad of the opportunity to make a hasty exit, for he knew that, after telling his competitor his prices, and just what "Burson and Condit" intended doing to get the business, there was n't a chance in the world for an order.

Art heard the sound of Burson's feet coming



HAPPY DAYS
ORRIN D. HOWLETT

up the steps and, running out into the hall, he peered over the balustrade and yelled down, "Need any help to bring that order in, Burson?" Receiving no answer, he went back into the room. In a few moments Burson entered. Without a word of greeting, he walked over to a shelf near the window, took down text-book number one, entitled "The Brachycephalic and Other Types in Humans;" text-book number two, on "Reading the Mind Through Feature Study," and the third and last volume, on "Scientific Deduction as an Aid to Salesmanship." He laid one book care-

fully on top of the other, then walked to the open window. Before Art could comprehend what he was about, Burson, with a savage gesture, threw them all out. When the crash came up to him from the court-yard, three flights below, he turned to Art, and, trying to force a smile, said:

"Will you promise to forget to ask any questions about the Evers-Dunning Company if I promise to immediately forget all the useless junk I got out of those books, and use my own common sense hereafter in selling goods?" And Art, seeing that Burson meant it, gave his word.

Bromide-Printing

C. F. INSTON, F.R.P.S.

IN this article I do not set out to say anything really new about bromide-printing. My aim is merely to give a simple, a very simple, account of my own method of making bromides — chiefly enlargements — interspersing a few desultory remarks based upon my experience with the process during the past twenty years.

One is often told that there are no bad plates and no bad papers; but this statement I must contradict at once. There are bad plates and there are bad papers — bad, I mean, in the sense that they are not fitted for the purpose one has in view, or for the result one wishes to achieve.

Let me put it in another way, and state that it is the worker, not the maker, who converts otherwise good material into bad by the simple process of wrong selection. More times than I can count, for example, I have had small prints submitted to me for judgment and criticism, made upon the roughest bromide-paper it was possible to procure. Needless to say, the prints did not satisfy the worker. "Why, then, did he make them on rough paper?" you ask. I do not know. Perhaps he had heard that prints made on rough paper were more "artistic" than those made on smooth; but he had quite overlooked the fact that this remark applied to large prints and not to small ones.

Selection of the right material or surface of paper is essential to success; but this is not all. Even with the right material and the right tools for the work, how easy it is to spoil even the very best photographic product! On the other hand, how very easy to achieve success, if one will but follow carefully the instructions laid down so explicitly by the makers, who ought to know

how their own wares can be used to best advantage.

Do I always follow the instructions sent out with each packet of paper, or those given in the text-books? Candidly speaking, I do not, except at first; but neither, on the other hand, do I depart far from the printed instructions or from the general rules laid down as applicable to the process. Let me try to make my meaning clear by describing my practice in this matter.

As soon as a new make of material, either plates or paper, is placed upon the market, I try it, invariably following the manufacturer's printed instructions to the letter. By this means I discover at once what it is capable of yielding, and then I proceed to try modifications — modifications of formula, or, perhaps, of exposure. Thus I find out for the future the exact uses to which I can put it, and learn how to gain my objective. Then, when I want a particular kind of print, I know at once the make of paper that will give it, and I use that paper only.

Few out of the thousands of photographic workers really know the power placed in their hands by the makers of bromide-papers. You may select Kodak paper alone; and from the many varieties of surface you can choose a paper suitable for any subject that may present itself, or any class of print you wish to produce.

Suppose I want an ordinary good black bromide-enlargement. Well, almost any Kodak paper will give me that quite easily if I follow the instructions. But I take it that only the professional worker wishes constantly to make what is called the ordinary print. In ninety-nine cases out of a hundred I want to produce something differing in one or more respects from the ordinary print, most probably for exhibition-purposes,



THE STORM

FORMAN HANNA

and I set about to produce it in this way.

First of all, I prove my negative with a print made upon Velox, and from that proof I try to judge what I am likely to get in a bromide-enlargement made from the same negative. If I have any doubts about it, I place the negative in the lantern and focus on to the easel up to 15 x 12 size, and there study the effect. If still in doubt, I make an ordinary enlargement on any bromide-paper that may be handy, and, finally, judge from that whether it is worth while to trouble to make any further enlargements from that negative. (Parenthetically, let me state that I always use a lantern and incandescent gas for making my enlargements.) If I decide to make other enlargements from my tested negative, I then select the paper that I have learned by previous experiments will give me the best results, and produce exactly the kind of print I want.

I always make a trial test; i.e., a series of exposures on a strip of the paper. (A test-sheet is

supplied with each large-sized packet of Kodak bromide paper.) I may possibly give four exposures of 20, 30, 60 and 100 seconds respectively, examine the test-strip, and decide which exposure to give for the print. I never index length of exposure on my negatives, preferring to make a fresh test with each fresh packet of paper. In the long run, I find this the best and cheapest plan.

Having made my test strips, and having decided on the correct exposure, I proceed with the larger print. As a rule, the first enlargement proves more or less satisfactory. It certainly will not be a print to destroy. If it does not prove to be up to exhibition-standard, I can tell from its appearance what modification of the developer or exposure will give me the exact thing I require.

What modification of developer or exposure is available? Let me deal first with exposure. One is always told, when working bromide-paper, that only by correct exposure can one get the best result. That may be true enough if one only

knew what is the correct exposure. Of course, the old hand knows, or ought to know, what the term means; but he who is not an old hand is often enough sorely troubled to know the correct exposure. I am afraid that he will only learn it through trials and tribulations, and at the cost of much paper; but for every spoiled print he should have gained and stored away knowledge and experience which will be helpful in future work. Personally, I always give what would be called a very full exposure — to some, indeed, it might look very much like overexposure. This I believe to be the best plan — a very full exposure in all cases, and subsequent control exercised by modifying the developer.

Let me turn now to development. How should the developer be modified to produce the desired effect? Obviously, one cannot lay down hard and fast rules to suit every case. In my own work, I rarely set out to make a deep black print, i.e., a print showing an intense black in its darkest parts. Indeed, I rather lean to a gray-black, and I use amidol, or Dolmi as this developer is called in the Kodak-instructions. In order to get the desired gray-black tones, I make up my developer with a little less Dolmi than the Kodak-formula prescribes for a given amount of sodium sulphite, and then I add water until I have a comparatively weak solution. On the other hand, I may want an intense blue-black print. I simply use a little more Dolmi than the normal amount given in the Kodak formula.

That is all simple enough so far, but what happens when I want a strong black and a good range of grays in my print? That problem may arise with a seascape, for instance, where there is a strong foreground and a mass of delicate clouds above. In making a print of that kind I always use a two-solution developer — generally sodium carbonate and metol, or Elon as the corresponding chemical is called. This gives me another method of control. I take two measures: into No. 1 I put an overdose of Elon and little carbonate; and into No. 2 I put an overdose of carbonate and little Elon. Having fully exposed my bromide-paper, in accordance with my usual practice, I develop out my darkest part slowly with No. 1 solution; then I wash the print and pour over it No. 2 solution, which will very quickly develop out the clouds and render them in full range of gray tones. Of course, I am mindful of the fact that a print "correctly" exposed can be quite spoiled either by underdevelopment or by overdevelopment; the first lacks gradation and detail, and the second is choked up and too dark. The remedy for each of these evils suggests itself to the intelligent photographer.

Again, I seldom make an enlargement with-

out using what is known as "bolting-silk." This I fix at a distance of about 8 inches from the lens when making a 15 x 12 enlargement. The use of this silk for procuring diffusion is so well known that it is needless for me to refer to it more fully, though I may call attention to the fact that a slightly longer exposure is required when it is employed, and care should be taken to use it when making the test-slips if it is to be used for the print.

Although I am not dealing with the making of prints for the purpose of Bromoil, I may say, in passing, that all my prints for this process are made in just the same manner as if they were intended to be left as bromides. This has been found to yield the most satisfactory results in connection with Bromoil photo-manipulations.

As I never take the trouble to tone a bromide-print, I do not intend to refer to any of the several toning-processes further than to suggest that the worker should follow faithfully the directions found in the packet of paper or study the text-books on the subject, and gain knowledge and experience by making trial of their teaching.

In writing of prints so far, I have meant enlargements; but nearly all my remarks apply also to small-sized direct bromide-prints. After all, the making of the negative is only a means to an end. The *print* is the thing that will give pleasure to the many — if it is properly made. Therefore, it behooves the maker of the prints to choose the best medium for his purpose; and, if he be a bromide-worker, he cannot fail to find among the many varieties of Kodak bromide one paper which, by his simply following out the plain instructions found in each packet, will be certain to produce prints of a beautiful, rich quality.—*From "Kodak Bromide Pictures."*

First Principles of Composition

Don't divide your picture into spaces of equal size and proportion. For some psychological reason of which we have not the explanation, the human mind abhors an equal division of space in a picture. Therefore, don't put either your horizon-line or your principal object of interest in the exact center of the canvas. How far above or how far below the center the horizon should be placed, will of course depend upon the character of the motive and its various units. Unless there is some very convincing reason for the high horizon, however, all experience points to the lower division as best. A vast sky always lends nobility to a picture; whereas the suppression or nearly total elimination of the sky tends to convert the canvas into a sort of transcendent still-life.—BIRGE HARRISON.



PICTURESQUE JAFFREY, NEW HAMPSHIRE

(CHARLES A. BEAN

The Pictures I Have Missed

EBERT BURLEW



IF I only had a camera with me!" is an exclamation that has escaped many of us at one time or another, whether we make portraits, landscapes or snapshots, or whether our knowledge of photography is limited to the simple conviction that a camera is an instrument of torture. This involuntary cry is the expression of our innate desire to make an indelible record of some fleeting incident, usually ludicrous or curious, that appeals to our fancy. It is seldom called forth by pathetic occurrences, perhaps because of our disposition to efface the sorrowful from our lives as quickly as possible.

More often than otherwise, if we actually had a camera at hand we could not have secured a picture anyway, for these striking incidents which make us cry, "My kingdom for a camera!" are usually impossible of photographic reproduction because of technical difficulties. So our wish is really for the power to draw or paint the picture instantaneously, as we ourselves see it, for only in this way can many of these incidents be recorded so that others may enjoy them.

There is another sort of occasion, however, when the photographer repeats this phrase in no feeble way. It is when he witnesses a striking event or scene of temporary nature that is photographically possible, and realizes that his camera reposes on its shelf at home. The cry then is one of inpotence, and his feelings exceed in intensity the emotions that must have filled the breasts of the Foolish Virgins of Biblical fame when they were denied admission to the marriage-ceremony.

Washington, our glorious National Capital, is the photographer's paradise — Washington of the arching trees, the inspiring vistas and the crystallization of the architect's dream! Here is a subject in itself worthy of all the art of the photographer; but when we add the ever-changing stream of prominent persons coming to the city, and the stirring events always occurring within its borders, we can understand, perhaps, why Washington is the Mecca of amateur and professional photographers.

Naturally, an abiding interest in his Capital is bound up in the heart of every American, and, sooner or later, he hopes to make his pilgrimage to this shrine of Democracy; but in the meantime his curiosity must be satisfied by an infinitude of pictures. There must be pictures of the parks, the streets and the buildings; pictures of

the men who have their hands on the throttle of our Government, and pictures of the beautiful women who are drawn there annually by the attractions of the social season or the demands of official life. And, let this be in strict confidence, any or all of them are ever ready to be photographed, if approached respectfully.

It was in Washington last Easter that my most recent experience in missing a worth-while picture occurred. We had turned from Columbia Road into Connecticut Avenue — that promenade made famous by the long line of notables who have paraded its broad sidewalks — and were attracted by a crowd which was forming in front of St. Margaret's, the quaint, rambling Episcopal church perched on a terrace in the shadow of the towering Highlands apartment house. To a Washingtonian this meant that the President was inside, for this was the church regularly attended by the first lady of the land before her marriage to Mr. Wilson, and now, as every one knows, attended alternately with the President's own church, the Central Presbyterian.

With nothing more urgent in mind than the usual Easter promenade, it was natural that we should join the steadily increasing crowd. A small group of secret-service men, who are ever at the President's elbow, these days, stood unobtrusively on the edge of the assemblage scanning the faces of newcomers. These men, whose experience would form a treatise on the psychology of crowds, seemed peculiarly out of place in this orderly, well-dressed Easter throng; but knowing that the fanatic is ever abroad, one could not question the necessity of their presence even at the very doors of the church.

This church, by the way, seemed to be a veritable magnet, drawing hundreds of persons to its doors. The crowds soon overspread the sidewalk and lawns, leaving only a passageway to the curb. The air was charged with a subtle note of expectancy — but we were destined to spend many long minutes before our vigil was rewarded. Communion services were detaining the congregation longer than usual.

My photographic instinct, which is ever present even though the black box is at home, caused me during the wait to study the crowd. It was a cloudy day, and this may account for the lamentable absence of cameras; for in a city where seemingly one person in ten carries a camera of some sort, there was only one in sight — a fixed-focus box, wholly inadequate for snapshot-work

in dim light. Every intent face, every Easter-gown and every brick of the gabled church was an open invitation to a lens — and no lens to respond. Indeed, the crowd seemed to be posing for its picture, with the unconscious look peculiar to people intent on something other than picture-taking. Truly, an exceptional opportunity lost!

Without warning, the President and Mrs. Wilson appeared. An awed silence prevailed — no cheers from the people; no customary smile or nod from the Chief Executive. For this was during the trying time when Congress was debating his solemn request that this country declare itself to be in a state of war with Germany. This student of men, who I have seen scan the faces of passersby with the eagerness of a boy, now walked with troubled eyes looking straight ahead into the future. The vigils of many nights had accentuated the lines of his face, but he was physically fit, as always; for great as is his burden, he has the power, I understand, to dismiss any subject when it threatens his peace of mind.

You can see the picture I missed: the absorbed crowd, divided into an aisle down which the President walked a step behind Mrs. Wilson; his solemn, unaverted face; the pervading stillness; the line of secret-service men; the waiting, high-powered White House automobile, which the President and his wife quickly entered; the instant departure — all as orderly as the ticking of a clock. Much of the obvious could have been recorded on a photographic plate; but how much of the vital current which surcharged the throng

would have escaped the camera's searching eye!

I wish I could also show you a picture of another sort — a view of the Government wireless-towers, piercing the heavens at Radio, Virginia — which I saw from my window in Washington, when angry, rolling clouds obscured the upper portion of these gigantic steel-structures. Looking out over the billowy tree-tops, across the meandering Potomac to the Virginia hills, where these three towers stand like imperishable sentinels, my thoughts imbued them with life. I could see their heads nodding wisely above the obscuring clouds as they gazed out over the world, needing only the hand of man to send their voice thousands of miles away to the waiting ears of their fellows standing erect in foreign lands. Their stentorian voice has already reached distant Paris, and one of the many services they render our Government is to keep up a line of communication with our warships, those armed tendrils of the American nation. The camera in the hands of a photographic artist would have recorded this meteorological phenomenon in black and white so that much of the hidden romance would have radiated from the print.

I could tell you also of a chance trip to the Union Station at the Capital just after a storm, when the heavens were gorgeously painted by the setting sun, and the wet, glimmering floor of the Plaza caught up the reflections. . . . But if I have succeeded in bringing to your attention the fact that many of the finest pictures are those that have never been taken, I am content.

Kitchenware in the Darkroom

GRACE COX RUTTER



It is not easy for a happy amateur to say which process of photography he enjoys most; but I believe if all would confess, we would learn that much of the pleasure of the hobby is in the shining nickel tanks, clear-grained wood and polished hinges of printing-frames, and the transparency of glass trays and graduates. And, as human nature takes special delight in its own productions, even so does the amateur enjoy his pet makeshifts and discoveries in the equipment-line. For the same reason it is likely that the worker whose purse allows him to buy at the start all needed paraphernalia never enjoys his equipment as much as he who must contrive helps on account of his slender purse. It is a pleasure to overcome obstacles.

Though well acquainted in the kitchen before I ever clicked a camera-shutter, I was slow to find anything there, except the sink and towel, worthy of darkroom-adoption. When my tray-breakages reached such proportions that they rivaled my squanderings on printing-paper — which is saying a good deal — I stumbled upon a nine-by-twelve-inch gray enameled baking-pan with handles. Those handles outclassed any of the glass developing-trays I had broken with hot water, and the hard rubber ones which had smashed when my treacherous fingers let them slide too suddenly into the sink or drop on the floor. A total of something like seven carelessly broken trays, funnels and graduates — seven was a complete number in this case — had kept up my unfortunate record ever since, when a



H. C. MANN



THE KINGLET'S SONG

O, who will sing and dance when I shall call?
O, who will make the colors for my play?
The hollyhocks are bowing yet beside the wall,
And they will make the colors blithe and gay.
I'll rest upon the golden-rod, and swing and sway
Through August day, my August day!

JOSEPHINE S. DARLINGTON.

child on the farm, I was famed for breaking lamp-chimneys and dishes. Mother used to say that if I looked at a chimney it cracked — the reputation proved a dear price for my exemption from washing them. Alas, I still have the same way with glass-negatives. There may be other workers of similar shortcomings, and when buttery-fingered people like us get infected with the photographic germ, while learning they are apt to smash everything breakable from trays and negatives to their own bank-accounts and hearts, and the sooner they get hold of durable utensils the better for their feelings.

The nine-by-twelve-inch baking-pan was the first of many culinary pieces to be welcomed in my darkroom. Though intended primarily for cooking-purposes, they are fully as handy for developing- and toning-trays, washing- and fixing-pans, measuring-cups, strainers and other uses, and they are cheap, easy to keep clean, light-weight, and, best of all — for me — unbreakable, and the handles and “lips” found on many of the pieces are an advantage one fails to realize the full benefit of until use has proved their value and practical efficiency.

Anticipating the peculiar action of acids and some chemicals on the first tiny crack which may come from a bruise in the enamel-coating, I find it well to cover with a coat of acid-proof paint the most-used pieces. White enamel or Probus, which dries a glossy, jet black, may be used. Thoughts of the time required for painting need cause no worry, as the process is done quickly and thoroughly in a few minutes, and a pint of Probus at sixty-five cents will be found sufficient for the lifetime-needs of the average amateur. It is best to give two coats, the second after the first has dried. Really, new utensils do not need to be painted on the outside, but neat workers may prefer to finish alike all over. If given reasonable care, cheap enamel pieces, thus painted, will last many years without cracking or staining prints or negatives, and the original cost is but a fraction of the regulation photographic ware.

An enameled pitcher in the quart-size holds thirty-two ounces, and is indispensable as a measure in the darkroom, whereas a larger

pitcher is excellent for mixing solutions. They cost from twenty-five cents upward. There is a small enameled cup like the one the baby drinks from — which holds just eight ounces; its elder brother in size and price holds twelve ounces, and both are equally handy and cheap. The enameled funnel at ten cents is so cheap that I can afford three — for developers, fixers and an extra one. You can buy them with a handle like a dipper, too, at fifteen cents. Do you know that one is made easily into a strainer by tying several thicknesses of cheese-cloth over the top, allowing it to sag well into the bowl of the funnel? A wooden potato-masher given two coats of white enamel makes a stirring-rod and crusher at once efficient and durable. The nine-by-twelve-inch baking-pan holds two five-by-seven negatives for developing, or more smaller negatives. The same style of pan can be bought in larger sizes for toning large prints, and smaller sizes for developing small negatives and post-cards. The medium size costs twenty-five cents.

There is a play dishpan holding two quarts which is handy for fixing a few prints, or, if tray-usage has trained you against round shapes, there are oblong pans in many sizes from the eight-by-ten-inch sheet-steel dripping-pans at ten cents to the twelve-by-seventeen-inch size at twenty cents. Of this material two thorough coats of paint are necessary inside and outside. These pans have wire-handles; the enameled pans have handles either stamped in one piece with the pan or riveted on. Then there are the sauce-pans with the dipper-handles — so convenient to use. The three-pint size costs ten cents and the four and one-half-quart size costs twenty cents. These usually have a “lip,” which renders a funnel unnecessary.

For mixing up solutions in considerable quantities, and utensils for fixing a large number of prints, larger and deeper pans are needed. Preserving-kettles with “lip” and bail-handles can be bought at fifteen cents for the three-quart size to thirty cents for the nine-quart size, and there is ample range of sizes to fit any individual needs. Of course, when buying pans for this purpose, you should select those without covers; the prices are lower, too, that way.





Courtesy Mabel Normand Feature Film Co.

MABEL NORMAND





EDITORIAL



Disposing of Idle Prints

IN these days of enforced economy the amateur photographer, like other thrifty individuals, has been looking over his stock of negatives and considering how he can convert them into cash; for in what other way is he likely to find the means to contribute to the Red Cross? In the course of pursuing his hobby, he first makes the picture for his own individual pleasure, and pastes a print in his photograph-album. Of course, a superb enlargement goes to adorn his home or his office. Being blessed with a generous disposition, his next step is to distribute enlarged prints of the picture among his friends, occasionally utilizing a tastefully framed specimen as a wedding or Christmas gift. Still further impressed with the beauty of the picture, he enters a neatly mounted print in one of the PHOTO-ERA competitions. If it wins a prize, or even an honorable mention, the print becomes the permanent property of the magazine, to be published therein at some future time, and to form part of a collection of selected prints to be lent to camera clubs and public libraries for exhibition-purposes. If, however, an opportunity should arise for an important use of the specially prepared print — the negative, perhaps, being no longer available — the amateur knows that the Publisher is always willing to relinquish it and to aid the owner to dispose of it to the best advantage. This was explained fully in an April editorial. Therefore, when a favorite picture has won recognition in a PHOTO-ERA competition, it must not be inferred that the doors of opportunity have closed permanently upon it. The best suggestion that can now be made is that the amateur arrange his prints and negatives according to one of the several excellent systems that have been described in this magazine. A list of the pictures, classified according to subjects, should then be printed, and a copy, together with a brief description of each subject, size of the print to be furnished and the price, sent to the publishers of standard books, calendars and pictorial designs, who are looking constantly for suitable and original photographs. "PHOTO-ERA Quality" may not be a bad endorsement, for most publishers are familiar with the pictorial standard of the photographic illustrations that appear in these pages. Amateur or professional participants in our competitions who expect to adopt these suggestions with re-

gard to prints that are likely to be reproduced in PHOTO-ERA may deem it advisable to notify the Publisher, that he may withdraw the corresponding print or prints from publication.

Photographic Preparedness

A WORD that has been uttered with a frequency and intensity unlike few words in the English tongue, during the past three years, is preparedness. Its literal significance is to make ready — to prepare for an emergency; yet its full appreciation did not obtain until the physical safety of this nation was threatened. What this country can accomplish in times of stress and patriotic enthusiasm was shown when the Liberty Bond Issue and the Red Cross Fund were quickly oversubscribed. This was the work of individuals. A man's choice of a vocation deserves equally serious consideration, and the condition of thorough preparation should be equivalent to efficiency, and the lessons of real efficiency or thoroughness have been brought home to us by overseas activities, industrial and financial, and the conservation of resources. Very frequently, the trouble is that persons who enter the photographic field, professionally, do not seem to regard a thorough practical preparation as necessary to success.

Many an amateur, with no marked ability, and certainly no practical experience, and encouraged by admiring friends, has entered the professional ranks only to taste the bitter cup of failure. As to self-made master-photographers with no previous training or experience, they have yet to be discovered, together with their fellows in painting and music. Even Raphael and Mozart — as boys — acquired first principles, and these at competent hands. The photographic profession contains many workers who merely potter along — untrained at the beginning and unprogressive to the end. Then there's the amateur who, with more enthusiasm than efficiency, enters the professional arena. Aided by adequate capital, an engaging personality and a measure of assurance, he holds his own for a period of years. During all this time he feels his way along, gradually discovering one shortcoming after the other, and struggling to improve his work, while acquiring no reputation or wealth. Finally, exhausted by vain efforts to reach the goal of artistic and financial success, he retires in favor of another line of business. Moral!



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of ***stiff*** corrugated board, not the flexible kind, or with thin wood-reinced. Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

Quarterly Miscellaneous Competitions

THESE will continue to be featured in PHOTO-ERA competitions during 1917 and 1918, so as to afford more opportunities to our readers to win official recognition.

Awards — Miscellaneous Competition

Closed May 31, 1917

First Prize: H. B. Rudolph.

Second Prize: E. M. Pratt.

Third Prize: Jared Gardner.

Honorable Mention: Elmer A. Beard, F. E. Bronson, J. E. Bush, Martha Curry, L. A. Dyar, Ralph H. Fellows, Bertram F. Hawley, W. R. Houchen, William D. Kelly, J. Kreig, A. Nyquist, M. W. Reeves, J. Herbert Saunders, E. W. Trelawny, Alice Willis, Latimer J. Wilson, William J. Wilson.

Special commendation is due the following workers for meritorious prints: Otto W. Bahl, Louis F. Bucher, Ralph W. Lee, Holmes I. Mettee, Kenneth D. Smith.

Subjects for Competition — 1917

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Domestic Pets." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Still-Life." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Free Trial-Subscriptions

PARTICIPANTS in either PHOTO-ERA monthly competition, who receive Honorable Mention, may have the privilege to give to a friend — not a reader of the magazine — a free trial-subscription of three months. This plan is also to be retroactive and to include entrants in competitions beginning with March, 1917.

If those who are interested in this proposition will promptly notify the Publisher, their wishes shall be complied with immediately.



IN THE GOOD OLD SUMMERTIME

H. B. RUDOLPH

FIRST PRIZE — MISCELLANEOUS

Spirit of Summer — Advanced Competition Closes September 30, 1917

At the outset, let the entrants in this month's competition understand that vacation-pictures do not express necessarily the "Spirit of Summer." Although it is true that a picture of a merry picnic-party enjoying its lunch in a pretty woodland-dell reflects the happy days of summer-vacations and week-end holidays, it does not express, in terms of beauty, feeling and spirituality, the true and marvelous power that has made the whole earth glad after the long and dreary winter. Whether we admit it or not, all of us cannot help but wonder at God's handiwork. The woods, hills and fields spring into life, and not a foot of ground is without its story of animal, insect and vegetable evolution that may be treasured on a photographic plate. In the sky, we have the wonderful cloud-formations, the stars and the birds. A picture entered in this competition should embody your realization of the dynamic forces at work and that summer is more to you than vacation-time. Remember that there is to be a competition devoted specially to vacation-pictures, and that in no circumstances does it conflict with the present competition. The difference cannot be emphasized too strongly. The "Spirit of Summer" Competition is a deeply serious attempt to express photographically the highest and best artistic conception that you have of summer, and its relation to nature and to man.

During no time of the year is nature so lavish with her scientific and pictorial possibilities. A little picturesque pond can keep you busy the entire summer.

First, you have the whole pond to photograph from all angles that seem to you to bring out its charms to the best advantage. Second, the pond, at sunrise, at noon, at twilight, by moonlight, storm-swept, tranquil, with clouds floating lazily overhead, and by firelight, offers innumerable artistic opportunities. Third, think of the nature-study subjects, such as the flowers, insects, small animals, turtles, frogs and birds, that are busily living their lives in and around such a spot. You have but to recall the many years that Thoreau frequented Walden Pond, at Concord, Mass., to understand and appreciate the infinite possibilities that offer themselves to the photographer.

In the mountains there are likewise opportunities at hand. Cloud-formations across the hills and valleys would alone serve to give the worker an endless supply of magnificent subjects. The strikingly beautiful pictures of clouds by H. C. Mann and Forman Hanna, which have appeared in *PHOTO-ERA*, illustrate what may be done. Mountain-scenery is at once the most beautiful and the most discouraging form of photography. Perhaps no other subjects cause you to realize more poignantly the limitations of your equipment. It does not matter whether the camera is expensive or reasonable in price — it fails invariably to do justice to the scene that lies so resplendent before you. To unlimited patience must be added an instinctive and correct knowledge of exposure, perspective and the use of ray-screens of varying densities. Even then mountain-photography is often bitterly disappointing. When you have matched your skill and won — then no picture is a source of greater pleasure and permanent satisfaction.

The seashore attracts many camerists, and competitions in the past bear witness to the superb marine-pictures available to the intelligent photographer. The charm of a yacht careening to leeward in a spanking breeze, with all sails set to drive her to the finish-line, is inspiring, and always satisfies that spirit of adventure that lies within us all. However, such a subject requires unusual treatment to avoid making it a marine instead of an expression of the "Spirit of Summer." Those contestants who can utilize sea-subjects to express the "Spirit of Summer" will have need of originality and a true understanding of the object of the competition. Without a doubt, many will test their skill to overcome the difficulty, and their efforts will be watched with interest.

Genre-subjects should offer a fertile field for the camerist seeking to portray the "Spirit of Summer" as applied directly to life in city or country. The activities of the farmer as he attends to his agricultural pursuits have an unusual significance at the present time. Every phase of farm-life is of interest, and if, in addition, the worker can make the seeming humdrum routine express his conception of the dignity of honest toil, the value of this labor at the present time and the "Spirit of Summer," he will have produced a picture of permanent interest. The livestock about the farm offers many subjects to the intelligent photographer. However, these must be handled carefully to avoid producing a picture that is commonplace, and devoid of the story it is intended to tell. In the city, the parks, streets and commercial centers may offer the very subject that is sought. Before the camerist can make a success of it, he should try to enter into the scene sympathetically. By that I mean as a participant and not as an onlooker. If it be a group of hot and weary children in the Ghetto that he wishes to photograph, let him stay in the hot, crowded streets long enough to realize how those children must feel, then he will understand, and make a picture that is true to the life. Whatever the subject may be, he must have his heart in it before he can make others feel what he felt — and this is true of all art, literature and music.

At this time a word of caution should be given all camerists to avoid making pictures near forts, arsenals, wireless-stations, navy-yards, piers, or, in fact, near any place that is directly connected with governmental war-activities. No matter how innocent the camerist's intentions might be, the Federal authorities are taking no chances, and in all probability would place him under immediate arrest, with the privilege to explain his actions at their leisure — not his. In view of the insidious workings of enemy-propaganda, the Government cannot be blamed if it takes vigorous measures without delay.

With regard to camera- and lens-equipment, let it be understood clearly that it is not the camera or lens, but the person behind the camera, that is the controlling factor of success. Of course, the worker who is equipped with an extension-bellows camera can obtain results impossible with a fixed-focus type; and, again, he who possesses an anastigmat lens is able to make pictures when the person without one must wait or go home. Nevertheless, the humblest equipment, handled skillfully, can express the true "Spirit of Summer" as beautifully as the latest high-grade equipment costing several hundred dollars. If the purse permits, one of the best outfits for serious amateur or professional photography is a 5 x 7 double-extension plate-camera equipped with a medium-priced anastigmat of symmetrical construction. True, the entire outfit is bulky and plates are heavy; but the fact remains that most of the workers who produce prize-winning pictures use plate-cam-

eras; not because they like the weight, but because they can focus and compose the picture accurately on the ground-glass. Film-packs may be used in these cameras, and, in some makes of reflecting-cameras, roll-films are used with excellent results; but the vital point to remember is that these cameras produce an image on the ground-glass or mirror that is an exact facsimile of the image that will appear on the plate or film. There are many good finders on the market, and they are very efficient for snapshot-photography; but we are now considering the making of pictures that will express a thought of beauty, sympathy, and possibly teach a lesson. Such pictures must be thought out; they must be suitably composed, and the technical work must be perfect. The ground-glass or mirror is the most efficient means yet devised to attain these artistic requirements. Let not those who own other types of cameras feel discouraged at the above remarks. Please note that I said, "if the purse permits." We would all have things different if our purses allowed. I merely stated what the well-known workers have found to be best for their requirements, and, as in other lines of human activity, we cannot ignore the work and the experience of the pioneers. In short, if possible, use some type of camera equipped with a ground-glass or mirror to make the kind of pictures under consideration; otherwise, use the camera you have, and by originality, skill and study counterbalance whatever you lack in camera or lens-equipment.

It is earnestly hoped that camerists will enter into this competition with a view to making it a source of pleasure and of value to themselves and to others. Let a spirit of good comradeship prevail, with the result that, win or lose, all will feel the better for having made the effort. With the hearty co-operation of every contestant, this, and all competitions, may be made to help camerists as nothing else can, and we will all learn and improve together.

A. H. BEARDSLEY.

Renovating a Worn Camera or Case

WITH a view to economy, R. M. F., in the *Amateur Photographer*, offers a good suggestion. "The present is a time when the worker thinks of endeavoring to renovate his apparatus, and often it is the black imitation leather-covering of the camera or the camera-case that shows the worse signs of wear. Many preparations are sold to renovate leather camera-coverings and cases, but although they may be excellent in their way, they are more or less expensive. As productive of fine results, the following method, although it will not make leather 'like new,' will restore much of its pristine freshness to a worn camera or black-leather camera-case. Moreover, the process is very simple. Go to a saddler's, and ask for a few cents' worth of black-leather dye; this will be enough for repeated applications, and will keep for years. The dye should be rubbed well over the black outside parts with a rag, care being taken to apply it evenly and quite a light coat. This should be allowed to get thoroughly dry, and the process repeated, giving special attention to any worn parts. When this second application is dry, a good brown-leather polish should be applied with a cloth, and well rubbed into the leather. The brown polish is to be preferred, as a black one tends to rub off subsequently upon hands or clothes. The whole secret to obtain a fine subsequent polish lies in the thorough rubbing into the leather of a thin application of the polish; too much is far worse than too little. The leather may then be polished with a clean soft cloth, and, if desired, a second application of the polish may be



SUNSET, SACRAMENTO RIVER

E. M. PRATT

SECOND PRIZE — MISCELLANEOUS

given. It may also be added that this has quite a waterproofing-effect upon a camera or case. The above, though exceedingly simple and easy to carry out, will be found quite as effective as many of the preparations under fancy names on the market, and it may well be the case that it is even more so, and it will certainly score on the grounds of economy. In the case of a brown-leather camera-case a good application of a polish as described — without, of course, the dye application — is as good a renovator as can be employed."

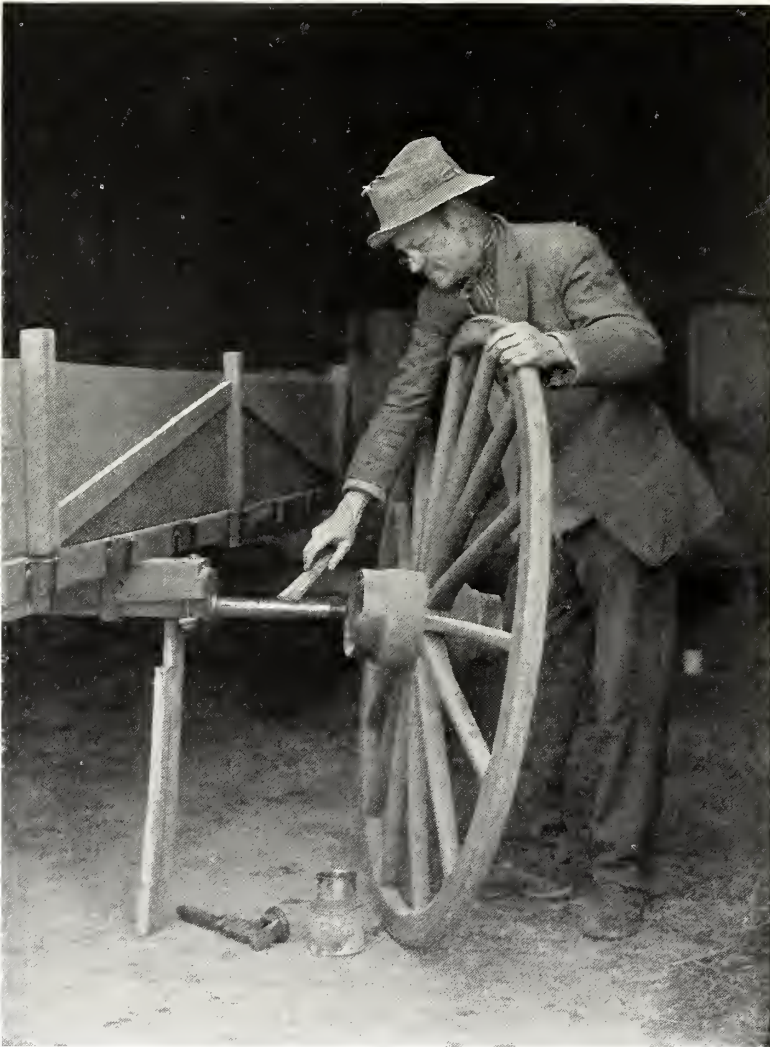
To Silver Glass

THE following are the details of Mr. Raymond E. Crowther's method to silver glass, which he brought before the Royal Photographic Society a fortnight ago. He first takes a sheet of ordinary plate-glass and cleans it, using equal volumes of alcohol and strong ammonia, made into a paste by precipitated chalk; this is rubbed over the glass-surface with cotton-wool until it is very nearly dry, and then another piece of cotton-wool is taken and the cleaning is finished. The silvering is done face upward in the dish, which is a great advantage. The volume of solution employed is governed by the shape of the vessel and the size of the article to be silvered. A quarter-plate silvered in a daguerreotype dish required about 75 c.cm. to give the required depth. The silvering is done at a temperature of about 65 degrees, and it is well to have the article which is being silvered from 5 to 10 degrees warmer than the solutions employed. After the cleaning-operation the glass is transferred to distilled water, and left there during the preparing of the silvering-mixture. This consists of 8.5 c.cm. of a 10 percent silver-nitrate solution, 3.5 c.cm.

of which is placed in reserve and diluted to four times its volume of water. The remainder is taken for immediate use. Into this solution, with an ordinary penfiller, a little concentrated ammonia is dropped until the precipitate which is first formed is dissolved. To this solution 6.5 c.cm. of 7.2 percent caustic soda solution — equivalent roughly to the usual 10 percent solution of caustic potash — is added, and the precipitate is again dissolved by the cautious use of ammonia. The diluted portion of the silver-nitrate solution previously set aside is then added, and the whole is filtered at once through cotton-wool and diluted with distilled water up to 65 c.cm. The reducing-solution consists of two parts, which are used in equal volume:

- A. — 9 gm. lump or crystal cane-sugar in 50 c.cm. distilled water, add 0.4 c.cm. nitric acid (concentrated), add 17 c.cm. alcohol, and make up to 100 c.cm. with distilled water.
- B. — 10 gm. sugar in 50 c.cm. distilled water, add 1 gm. tartaric acid crystals, boil five minutes, cool, add 18 c.cm. alcohol, and make up to 100 c.cm. with distilled water.

The second of these solutions can be used as soon as made, but used alone it gives deposition rather too quickly; the first improves in its action by being kept for some time before use. The author of the method uses them in equal parts, taking in all 8.5 c.cm. of the reducing mixture and 1.5 c.cm. of distilled water, and adding to the 65 c.cm. of silvering-mixture. The glass, when deposition begins, has a sort of blue appearance, and at the given temperature deposition begins in two minutes, the vessel being rocked the whole of the time, and is complete in about $5\frac{1}{2}$ minutes. The glass is then



GREASING THE WHEEL

JARED GARDNER

washed in two or three changes of distilled water, and finally rinsed under the tap and dabbed with a pledget of cotton-wool, dried with filter-paper, and rubbed with a wash-leather. The polishing of the mirror presents no great difficulty. It will take a high polish in the course of 30 seconds. Mr. Crowther uses for this purpose some fine rouge on a pad of wash-leather. The amount of rouge on the pad needs to be extremely small, or gritty particles may scratch the reflecting-surface.

Figure-Composition in Landscape

PROSPECTIVE pictorialists desirous to improve their picture-making abilities with reference to a standard work on figure-composition are advised to consult the volume on this subject by Sadakichi Hartmann (Sidney Allen). This is a *de luxe* publication, $7\frac{1}{2} \times 10\frac{1}{2}$ inches in size, beautifully printed on heavy coated paper, gold top and sides, and illustrated with over 150 halftones (from celebrated paintings and appropriate photo-

graphs by well-known pictorialists) and diagrams. This superb volume is from the pen of one of the foremost living art-critics, and is designed to guide amateur photographers to successful efforts in composition of landscapes with and without figures. The work was published, originally, at \$3.00, but PHOTO-ERA procured 150 volumes at a special price, and will sell them to its readers at \$1.50 a copy, sent by express, collect, or by parcel-post (consignee's risk), postage according to zone. Each copy, in a neat cardboard box, ready for shipment, weighs 33 ounces.

To Photo-Era Readers

THE Publisher earnestly requests the readers of PHOTO-ERA to give the preference of their patronage to goods and wants advertised in PHOTO-ERA: for no advertisement, whether large or small, is accepted unless it is trustworthy in every respect.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY



Ultra-Violet Light

ULTRA-VIOLET light is light of short wave-length (less than 3900 Å°U), and this light decomposes silver salts in a photographic plate, and is, therefore, studied by taking photographs of its spectrum, produced by a diffraction grating. Different media, however, absorb part of these ultra-violet light-waves — glass most of them, quartz less, and air least of all; but even air absorbs certain wave-lengths less than about 2000 Å°U. This being the case, under ordinary conditions a photographic plate does not detect light of less than this wave-length. If, however, the experiments are carried out in vacuo, light of less wave-length is detected quite easily. Now, X-rays are rays of ultra-violet light of extremely short wave-length, and glass does not absorb them, neither does air, and so, being ultra-violet light, they can pass through air and affect a photographic plate. X-rays travel in straight lines, and cannot be deviated by a magnet or by passing through a medium. Also, they pass through bodies which are opaque to visible light; but it has been proved that the opacity of a substance to X-rays is simply proportional to its density. Thus aluminum, wood, flesh, soda, glass, etc., which are substances of low density, are practically transparent to X-rays; while heavy metals, such as steel, lead, platinum, gold, etc., are opaque to these rays. Bone has an intermediate place. Therefore, if the hand is put between the X-ray tube and a photographic plate, a shadow radiograph of the bones is produced on the plate owing to the bones allowing less rays to pass through them than the transparent flesh. If a ring is placed on the finger this will appear on the shadow radiograph as a black ring, because it allows no X-rays to pass through. Perhaps it would be interesting to know that the wave-lengths of X-rays are so small that, when reflected from a highly polished mirror, they are diffused (i.e., the mirror is comparatively "rough").

Psychic Photography

THE ability to photograph psychic and astral bodies has been claimed by several persons of a spiritualistic turn of mind. According to reliable information, a man by the name of W. H. Munier, of Boston, U. S. A., maintained a studio as long ago as 1861 devoted entirely to this form of photography. In England, it is believed that the first psychic pictures were made by Mr. and Mrs. Guppy, in March, 1872. According to reports, the death of Mr. Maskelyne, an authority in spirit-phenomena, brought to light the fact that he was never at a loss to explain spiritualistic manifestations; but with regard to the famous Indian rope-trick, he admitted his inability to offer a solution. Bearing in mind the progress made in psychic photography, some travelers who chanced to witness a native performance employed a camera in the effort to prove that the success of the trick depended on hypnotism.

Briefly, the trick is performed in the following manner. A native juggler and boy-assistant appear, and after a brief conversation the juggler produces a ball of twine which he throws into the air. To the amazement of the spectators, the ball continues to rise into the sky until it disappears, leaving the end in the juggler's hand, as if he were flying a kite. After a mo-

ment, the boy-assistant begins to climb the twine, hand over hand, until he also disappears completely. The juggler orders the boy to return; but there is no reply from the sky. At length, in a rage, the juggler himself follows, after sticking an ominous-looking dagger in his belt. All that remains in sight is one end of the twine. Suddenly, high in the sky, cries are heard and blood drops on the spectators, followed soon after by the mutilated body of the boy-assistant. Before the horrified onlookers can make a move, the juggler is seen to slide down to earth after his victim. After a few sleight-of-hand movements over the prostrate form of the boy, the juggler restores him to life and happiness before the delighted throng.

The travelers made a picture of the scene at the moment that the boy was supposed to be in the air during the performance of the trick, with the result that the camera failed to record the presence of the boy or twine at all. The conclusion reached by the travelers, and other authorities, was that the juggler hypnotized his audience so thoroughly that he could make them trust his word absolutely and not to their own senses.

In connection with hypnotism and spiritualism, it is interesting to note that the camera has played a more or less important part in the investigations that have been made. Such phenomena as may be traced to physical causes are now within range of the modern photographic equipment, which — as has been proved — can reproduce the invisible infra-red rays. No doubt the ever-increasing efficiency of photo-equipments will enable investigators to carry their experiments forward to a greater degree than ever before. Authentic results will be of interest and value to photographers in general, whether they are interested individually or not in spiritualistic manifestations.

Green Glass in Printing

THE use of green glass in printing on P. O. P. papers has been used successfully to produce contrast. In 1861, colored glasses were used by Lemann with satisfactory results. Since then this method has been employed repeatedly when printing from thin or flat negatives. In 1890, the use of greenish yellow glass was adopted to obtain — in connection with matte papers and the uranium toning-bath — not only contrasty prints, but black tones resembling Platinotype. It has been found that glossy P. O. P. prints brighter and better under green glass. This method is helpful particularly when printing from valuable negatives that are flat or thin, and which, for one reason or another, may not be intensified. The green glass eliminates the violet and deep blue rays of light, and allows the bright blue, green and yellow rays to pass through the negative and to act on the sensitized paper, with the result that the organic salts of silver are acted upon to a greater extent than those of the chloride. The organic salts have a shorter scale of gradation than the chloride, and for this reason the prints have stronger contrasts and the shadows are richer. The most suitable shade of glass to use is that known as "signal green" or "single flashed chromium green." Printing is prolonged considerably when green glass is placed over the negative. This method is applicable only to printing-out silver papers. Green glass has been recommended to make dryplates as it prevents halation.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value \$5.00.

Second Prize: Value \$2.50.

Third Prize: Value \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two owners or fraction is sent with the data. Criticism on request.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

6. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.*

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

Awards — Beginners' Competition

Closed May 31, 1917

First Prize: T. W. Kilmer, Jr.

Second Prize: H. M. Biggin.

Third Prize: H. I. Orne.

Honorable Mention: Paul G. Druley, F. Dunning, G. W. French, Lewis L. Hertzberg, Herbert R. Hood, Clarence Morgan, Henry L. Osborn, H. L. Rockwell, M. S. Schammel, Chas. L. Snyder, W. K. Waple, W. K. Waters, W. G. Willis, William J. Wilson.

Special commendation is due the following workers for meritorious prints: E. W. Congdon, R. B. Mansk.

Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher of PHOTO-ERA.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.



T. W. KILMER
T. W. KILMER, JR.
FIRST PRIZE — BEGINNERS' CONTEST

Get Acquainted With Your Camera-Equipment

THIS may appear to be superfluous advice, but like many another apparently self-evident fact, it is often overlooked by the very ones who would benefit by the advice. To be able to make a picture in no way implies that you have mastered your camera. If you do not understand how to manipulate the camera with regard to any and all variations of light and distance within the scope of the particular equipment that you possess, you remain but a helpless button-pusher, with whom the slightest deviation from normal conditions spells failure. Many amateurs exclaim, "Why, I have n't time to learn all that!" Nevertheless, they appear to have plenty of time to try to explain their failures to inquiring friends — and time for other diversions.

One amateur of my acquaintance did remarkably fine work with a high-grade anastigmat-equipment, yet he depended only too readily on a photo-dealer to load his camera. For some unaccountable reason, this camerist could not master the comparatively simple task to load his instrument unassisted, although he had manipulated a high-speed shutter and F/4.5 anastigmat lens without difficulty. There are other camerists of my acquaintance who appear to be unable to operate their instruments without some aid. In short, they lack confidence in their own ability. It is not that they are unintelligent, but that they have never really tried to stand on their own photographic feet. Photo-dealers will bear witness to the number of amateurs who cannot or dare not load their own plateholders lest they put the plates in glass-side uppermost and, consequently, toward the lens. When it comes to loading Autochrome or Paget plates, such amateurs never think of doing their own loading.

No matter if your photographic work is of the most cursory sort, it will pay you many times to be able to use your lens, shutter and camera-accessories entirely without assistance. In traveling, you are apt to suffer severely at the hands of a well-intentioned but ignorant photo-clerk. Particularly at small summer-resorts does the embryo photo-dealer flourish at the expense of the helpless amateur. In no circumstances entrust a high-grade equipment to the *experimental attention* of the would-be photo-dealer, unless he can prove his ability to you in other ways than by word of mouth. Persons who contemplate earning the expenses of their vacation by running a small photo-establishment during the summer-months will do well to heed my advice not to attempt it without knowing exactly what they should know about cameras and photo-accessories. I have seen many fine equipments ruined by those who meant well.

This should be a self-evident argument in favor of "making your own repairs," as the autoists say. By "repairs" I mean cleaning the lenses and removing them from the shutter, buffing the shutter-valves if they stick, due to moisture or dust, mending a leak in the bellows, and other work that should never be entrusted to inexperienced hands. One helpless amateur, equipped with a Kodak and rapid-rectilinear lens, lost every picture made on a long trip through the Canadian Rockies because an unskilled photo-clerk in cleaning the lenses pried them out of their cells and replaced them in a reverse position, with the result that every picture was too distorted to be even recognizable. Had the amateur in question known enough to clean the lenses properly himself, his subsequent bitter disappointment would have been avoided easily. Another case in point is that of an owner of a No. 2 Brownie camera. For some reason the rotary shutter with which this instrument is supplied failed to work properly after

the owner reached a distant mountain-resort. The camera was given to the local photo-dealer to adjust, with the result that the shutter was put out of commission completely. The turn of a screw by the owner would have ended the trouble at once. The photo-dealer, not understanding the shutter, took it entirely to pieces and could not re-assemble it, and in trying to make it work he broke one of the important parts. The owner returned home without one vacation-picture to show to his friends.

It is not my intention to mention further photographic tragedies, nor to insinuate for a moment that the small photo-dealer is to be avoided in times of trouble. My object is to drive home, emphatically, the necessity that amateur and photo-dealers study their cameras with a view to serve each other to the best advantage. The more both know about cameras, lenses and shutters, the more pleasure and profit there will be in photography for them both.

Let me suggest one more thing. When you have bought a camera, or you are about to use one that has been on the shelf since last summer, sit down with the intention to remain seated until you know the function of every button, lever and indicator on the entire equipment. Find out how the lens is cleaned, the shutter set and the camera or plateholders loaded; omit nothing that is not clear to you. At the conclusion of the investigation make some pictures, to prove to yourself that you understand how to use your camera. Be sure to try every attachment on the outfit, such as rising- and falling-front, swing-back, wide-angle bed or whatever your camera may have in the form of special features. It has been my experience that any amateur who takes the time and trouble to follow these suggestions seldom has need of explanations to account for his failure to bring home excellent pictures. *Be in a position to make a picture at any and all times within the scope of the camera you possess.* If every amateur took this suggestion to heart, it would work wonders. Let us hope that he does, and that he remembers the well-known saying, "The proof of the pudding is the eating thereof."

A. H. BEARDSLEY.

Frilling

DURING August and part of September camerists should watch out for frilling. The negatives that are developed at this season may be ruined entirely unless due care is taken. Frilling is due to the uneven temperature of solutions; too much soda or other alkali in the developer; handling the plates or films with warm fingers; too strong a fixing-bath or too hurried washing, where the water is allowed to get beneath the edges of the plates or films in such a manner as to lift the emulsion from its base. Often, frilling may be prevented by bathing plates or films in a ten-percent solution of formaline before or after development. A combined fixing- and hardening-bath may be used successfully. Should a plate or film show signs of frilling during development, the trouble may be overcome, sometimes by the use of alcohol on a tuft of cotton or by immersing the entire plate or film in alcohol. This may be done safely during developing providing the plate or film is rinsed carefully in several changes of water before placing it in the alcohol. Developing may then be resumed.

The importance of attention to frilling was impressed on me during a summer at the seashore. The cottage that we occupied was literally sun-baked all day, and at night the attic — where I had constructed a substitute darkroom — had a temperature of eighty or ninety degrees. On the day in question, I had taken particular



FEEDING THE DUCKS

H. M. BIGGIN

SECOND PRIZE — BEGINNERS' CONTEST

pains with some magnificent cloud-effects. That evening these beautiful pictures actually slid off the plates, to my consternation and subsequent disappointment. Though I had developed hundreds of plates before, it was my first experience under quasi-tropical conditions. My failure was due plainly to the warmth in my fingers—I perspired copiously—and to my neglect to obtain ice to place in the developing-dish and also in the fixing-bath.

In the mountains, and at some places at the shore, excellent results may be obtained with cold spring-water, providing it is not allowed to stand too long before use. Whether the camerist employs a developing-tank or tray-development, cold water is of prime importance. An outstanding advantage of the tank is that developing may be done wherever the coolest spot is located—inside or outside of the house.

With regard to the average vacationist, it is advisable to send all exposed plates and films to a competent photo-finisher who is equipped to undertake hot-weather developing. Usually, he is sufficiently experienced to know how to prevent frilling. It is well worth the cost and the time to ensure successful results.

A. H. BEARDSLEY.

Protecting a Negative

A USEFUL hint is given by T. Robinson in a recent issue of *Photography*. "When a negative is likely to be often in the printing-frame, and is a valuable one, it ought to be protected from all risk of injury from silver-stains, etc., and the usual method advocated for this purpose is varnishing. No doubt varnishing is *some* protection; but that it is not a complete guaranty

against these stains was brought home to me a year or so ago by a well-varnished negative, left in the frame with a piece of p.o.p. over-night, showing a bad crop of stains a day or two later. A complete protection against anything short of physical violence is to give the film a coat of enamel-collodion, pouring it on and off in the way that is usual with varnish, and rocking the negative on its lowest corner to prevent the film drying in ridges. When the collodion is quite dry the negative is given a coat of shellac varnish of the usual kind, and when this has become dry and hard it is well waterproofed."

Photographs for Military Information

THE announcement that the Government is asking for photographs showing various details of the country that is now in the occupation of the enemy, indicates that perhaps there was some method in the madness of the authorities near international frontiers when they put difficulties in the way of harmless amateur-photographers, and suspected the most irresponsible of camera-carrying tourists of being spies. Smith or Robinson photographing a stream or a mountain-gorge with no more ulterior motive than a silver plaque in our Advanced Workers' Competition, or the filling of a blank page in a "Sunny-Memories" album, can have little thought that one day the authorities would be asking for his negative to use it for military purposes. Those who take the side of "sharp" in the sharp *v.* fuzzy controversy, which is never ending, can at least console themselves with the thought that their work may serve a patriotic purpose never to be helped by that of their soft-focus opponents.—*Photography*.



ANSWERS TO QUERIES



Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.

S. M.—The most efficient method to remove objectionable detail from Bromide and D. O. papers is to have a competent retoucher—who understands the correct use of the air-brush—remove such portions of your print as may be unsatisfactory.

Of course, it is possible to work upon the negative, but unless you are quite skilful this is apt to be a rather

will do excellent work, but this is also true of any other lens, and if it is necessary to stop this lens down, a speed of F/1.9 is not essential for photography in ordinarily pleasant weather. Even if this lens could be made in four-inch focus, we are sure that working at an aperture of F/1.9 it could not be made to cover a $2\frac{1}{4} \times 3\frac{1}{4}$ plate to the edges. In our opinion we think that you would be fully as well satisfied with an F/3.5 lens, since you will not very often attempt to take pictures under conditions which this lens could not handle efficiently.

C. H. K.—The Tourists' Multiple Camera was placed upon the market by Herbert & Huesgen Company, 18 East 42nd Street, New York City. It was equipped with a Zeiss-Tessar F/3.5 lens, and was made to take motion-picture film. If we remember correctly, the capacity of the camera was seven hundred exposures. Together with the camera, there was a projector which took this motion-picture film and projected it upon a screen about four feet square. From



SEPTEMBER MORNING, MT. WASHINGTON

THIRD PRIZE — BEGINNERS' CONTEST

B. I. ORNE

risky procedure. Most photographers, at the present time, rely upon retouching with an air-brush to obtain the best results, and we commend this to your careful attention.

W. E. F.—The equipment mentioned on the Crucible page in the May issue required several technical changes in the construction of both camera and shutter. In your case, you state that it would be necessary for you to have a four-inch lens. No doubt you realize that to make a four-inch lens it would be necessary for the manufacturers to make an entirely new set of grinding-tools and test-glasses. This would increase the expense of the lens to such an extent as to make it prohibitive. No doubt you know that the lens you refer to is distinctly intended for motion-picture work, and that even among camera-men it is not used to any great extent except for very unusual pictures in bad weather or where no artificial light is available. The depth is so slight that it cannot be used wide open for anything less than a close-up of a subject. True enough, if the lens is stopped down, it

what you state, we do not think this equipment would meet your requirements. However, it would do no harm to write to the company mentioned above for further particulars.

O. C. W.—It does not necessarily follow that plates will make more artistic pictures indoors than films. The difference is that plates are manufactured in various speeds and emulsions, so that it is possible to obtain a plate which is particularly adapted to the work in hand. Films are issued with virtually one emulsion, which must do for all requirements. We believe that you will find films entirely satisfactory for your work.

A. S. Y.—Should you purchase a Graflex Junior Camera, you would be in a position to obtain plates of several makes, both foreign and domestic. This size is now very popular, and nearly all manufacturers have now incorporated it in their products. Plates permit a wider selection of emulsions, and for this reason are preferred by many photographers who wish to obtain the very best results.



PRINT-CRITICISM



Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.

G. H. F.—“Daddy’s Sweetheart” is a very pleasing picture, all but the bow on one of her fingers and the atrocious combination resting on her head. How any one can take a beautiful child’s head and disfigure it by such an atrocity in the belief that it is a mark of beauty and adornment passes all comprehension. Why paint a lily? The pose, lighting and technique are very excellent, and but for the defects mentioned the result might have been a very pleasing one.

L. F. H.—Your picture, “Daughters of Izaak,” depicts an interesting landscape, but with divided interest, consisting of a white mass extending exactly midway across the picture-area; the reflection in the pond, of trees in the background; a foreground of dry land or bank of a pond on which is a standing figure of a little girl in a short white dress, dipping a long pole in the water, and another child resting on the ground at the right, also dangling a long pole. The eye wanders aimlessly about the picture, not knowing where to rest. The composition is spoiled by the above-mentioned white mass, which divides the picture in halves. Moreover, the figures are blurred and, together with the foreground, are entirely out of focus, the sharpest part of the picture being the background. The reverse should be the case.

E. G. H.—In your indoor group of six old ladies, the heads of the ladies are all blurred, due to motion. No professional would even have dared to make such a picture in the circumstances. The fact that the old-time head-dress is no longer used is a detriment to indoor portraiture. The only way this can be overcome is by using ultra-rapid plates, strong illumination and judicious mechanical manipulation. It is not an easy matter to get elderly ladies to keep absolutely still for a period of more than two seconds. As a group, the picture has much merit. Everything is well defined except the heads, because they moved.

E. G. H.—The trouble with most of your child-pictures is overexposure, which is unusual in indoor portraiture. For this reason, the result is flat and monotonous. The pictures reveal artistic appreciation, but in each case fall a little short of being really good.

J. K.—Your picture of a horse drawing a one-seat buckboard, a driver and a boy seated on the rear end, suffers from being foreshortened; i.e., the forepart of the horse is much larger in proportion to the rest. Besides, the camera was held very low, which also increased the bad drawing. The composition is bad because the white tree-trunk, exactly in the center of the picture-area, divides it in halves. The white shirts of the boys do not increase the pictorial quality. In the main, however, the whole team is altogether too large for the picture-area, which it virtually fills up. The camera should have been used at a longer distance from the object. The picture of the young man reading in the hammock out in the shade of a tree is very pleasing, and technically well done.

C. E. P.—We think the picture of the ladies having afternoon tea on the roof is very good except that the

ladies appear to be posing. There is an absence of any impression of reality and spontaneity in the picture. Similar pictures of groups of this kind have appeared in PHOTO-ERA in the past. By consulting them, you will see what we mean. The background is not particularly attractive, but technically the result is very excellent.

The winter-scene is an ordinary technical record. It lacks atmosphere of a snow-picture and color-value. The use of a color-screen might have improved the effect.

C. B.—Your picture of Florida is so dark and gloomy, all the objects being as *black as ink* and without detail, that it does not remind one at all of the real Florida. Besides, it is not good photography.

H. M. B.—Your picture of boys gathering potatoes does not appear consistent, as most people who are earnest laborers assume a different attitude while at work. Second—the hands of the boy at the left are decidedly blurred, those on the boy at the right, likewise—he appears to have an easy time doing his work, perhaps he is only posing. In these respects the picture is not convincing. Third—the line of the fence seriously mars the pictorial arrangement. It could have been easily blotted out or subdued in the negative—even in the print. Fourth—both boys are virtually facing the left. A better arrangement would have been for the boy at the left to have faced somewhat toward the center of the picture, and also to have been placed somewhat more to the left. The background is entirely out of focus, marring the drawing, and entirely unnecessary, and not artistic or harmonious. The latter part of the picture falls away suddenly in clearness as compared with the foreground of the picture. If these shortcomings did not exist, the pictures would have been an extremely effective and artistic composition.

E. W. C.—Your picture, “Sunshine and Shade,” is very involved in arrangement. It might look well turned upward, as indicated by arrow. It is also top-heavy, as may be apparent to you. The combination is effective, but not necessarily consistent or artistic. Technically the print is very satisfactory.

R. B. M.—Your picture, “Tired,” is interesting; but pictorially or artistically, it has a dual interest, because the little girl, or her doll in the baby-carriage, should be the chief or only subject of pictorial concern. The vertical lines in the picture are entirely out of plumb. They should be absolutely vertical throughout. The picture is marred by the reflection in the door, which could easily have been removed in the negative. The picture is interesting, but not artistic.

M. S. S.—Your picture called “The Campanile” is not appropriate, as it is barely visible in the arrangement, the trees in the foreground dominating the interest. The picture might better have been called “A Study in Perpendiculars or Verticals.” The pictorial effect is good. Only the title appears to be at fault.

H. S.—Your picture of Florida is so dark and gloomy, all the objects being as *black as ink* and without detail, that it does not remind one at all of the real Florida. Besides, it does not represent what we should call good photography. Even when a scene is photographed directly against the sun, there is detail and a certain amount of gradation in the objects facing the camera.

G. K.—Your picture of “Mr. G.” is excellent, except that it looks a trifle anemic. The face is in too high a key, which is probably the reason that the eyes appear a little weak; but still this may be due to the source of light, which appears to be directly in front. But pose and spacing are admirable. Very frequently the source of light weakens the eyes and deprives them of their natural force and depth.

Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of the time in the table. From 8000 to 12000 feet use $\frac{1}{2}$ of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

HOURL	MONTH AND WEATHER																			
	JAN.,					FEB., OCT.					MAR., APR.,					MAY, JUNE,				
	NOV., DEC. †					†					AUG., SEPT. †					JULY				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
11 A.M. to 1 P.M.	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
10-11 A.M. and 1-2 P.M.	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
9-10 A.M. and 2-3 P.M.	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	1^*	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	1^*	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$
8-9 A.M. and 3-4 P.M.						$\frac{1}{5}$	$\frac{1}{2}$	1^*	$1\frac{1}{2}$	3^*	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{2}{3}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$
7-8 A.M. and 4-5 P.M.											$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$
6-7 A.M. and 5-6 P.M.											$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1^*	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
5-6 A.M. and 6-7 P.M.																$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$	$1\frac{1}{2}$

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

SUBJECTS. For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, to glades and under the trees. Wood- interiors not open to the sky. 48 Average indoor-portraits in a well-lighted room, light surroundings.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

For Perpetual Reference

For other stops multiply by the number
in the third column

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.	U. S. 1	F/4	× 1/4
	U. S. 2	F/5.6	× 1/2
	U. S. 2.4	F/6.3	× 5/8
	U. S. 3	F/7	× 3/4
	U. S. 8	F/11	× 2
	U. S. 16	F/16	× 4
	U. S. 32	F/22	× 8
	U. S. 64	F/32	× 16

Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply $1/16 \times 4 = 1/4$. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. $1/16 \times 1/2 = 1/32$. Hence, the exposure will be 1/32 second.

Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.

Ilford Monarch
Lumière Sigma
Marion Record
Seed Graflex
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.

Anso Speedex Film
Barnet Super-Speed Ortho.
Central Special
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Imperial Special Sensitive
Seed Gilt Edge 30
Wellington Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.

Barnet Red Seal
Cramer Instantaneous Iso.
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Ilford Zenith
Paget Extra Special Rapid
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.

American
Anso Film, N. C.
Atlas Roll-Film
Barnet Extra Rapid
Barnet Ortho. Extra Rapid
Central Comet
Imperial Non-Filter

Imperial Ortho. Special Sensitive

Kodak N. C. Film
Kodoid
Lumière Film and Blue Label
Marion P. S.
Premo Film-Pack
Seed Gilt Edge 27

Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso. Speedy
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.

Cramer Banner X
Cramer Isonon
Cramer Spectrum
Defender Ortho.
Defender Ortho., N.-H.
Eastman Extra Rapid
Hammer Extra Fast Ortho.
Hammer Non-Halation
Hammer Non-Halation Ortho.
Seed 26x
Seed C. Ortho.
Seed L. Ortho.
Seed Non-Halation
Seed Non-Halation Ortho.
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.

Cramer Anchor

Lumière Ortho. A

Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.

Cramer Medium Iso.
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.

Barnet Medium
Barnet Ortho. Medium
Cramer Trichromatic
Hammer Fast
Ilford Chromatic
Ilford Empress

Seed 23

Stanley Commercial
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.

Cramer Commercial
Hammer Slow
Hammer Slow Ortho.
Wellington Ortho. Process
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.

Cramer Contrast
Cramer Slow Iso.
Cramer Slow Iso. Non-Halation
Ilford Half-tone
Ilford Ordinary
Seed Process

Class 100, P. E. 11 Wy. 3, Wa.

Lumière Autochrome



ON THE GROUND-GLASS

WILFRED A. FRENCH



The Danger of a Practical Joke

A HARMLESS joke frequently practised by camerists is to threaten to make an exposure of a person, group or scene, sometimes causing a great deal of embarrassment to the helpless camera-subject. I have frequently seen a mischievous camerist point his box at a loving couple, or at a young lady industriously using her vanity-case, entirely unconscious that she was being observed. In each case, I suppose that the camerist was just amusing himself at the expense of his victims, and probably had no intention whatever to get a picture.

A similar case, and the one to which I shall refer, had a different ending. It was at an open-air tea-party on a private estate. Some of the younger people became very gay, of which circumstance a passing camerist tried to take advantage, pointing his camera ostentatiously at a mirthful group, and, with a gesture of triumph, he proclaimed the fact that he had secured a picture of the scene, to which he was not entitled to be even an observer. His intrusion was promptly resented by a young man, a member of the party, who promptly brought his tennis-racket down upon the folding-camera, putting it out of commission before the owner had a chance to escape, or to explain — which afterwards proved to be a fact — that he was only pretending, and that his camera was not even loaded! It is therefore not always safe for a camerist to play the role of a practical joker.

Utilizing Your Old Negatives

IF, in looking over your numerous negatives, meritorious and otherwise, you find that they have served their various sentimental ends, and before you decide to consign them to oblivion, read the editorial in this issue. Besides, many a photographic print that its author has regarded of merely personal interest, though not of a strictly private character, might have served a public and beneficent purpose had the fact been made known in time. Look into it!

Printing from a Broken Negative

It is sometimes amusing when a well-known expedient is printed at almost regular frequency and put forth as something new. Take, for instance, the moss-grown remedy for printing from a cracked negative. If I have seen it once, I have seen it a hundred times during as many weeks — here, there, everywhere — as if it were the one and all-important topic, and each time piping the same old tune. The way to go about it properly did not originate with this or that photographic journal, but was practised quite successfully during the early days of wet plates. Then, any professional photographer would merely let the printing-frame, with cracked or broken negative and sensitized paper, down into a common barrel, suspended by a cord attached to a cross-cord at the top, and give it a good spin. The resulting print never showed a trace of the damage in the negative. The theory was that the rapidly revolving negative and the weak light entering at the top of the barrel prevented the crack from casting shadows in the print. Give the frame another spin!

From Bad to Worse

MANY things, good and bad, make their appearance in the form of epidemics. It is so with terms of speech. The purist is at present much annoyed by the indiscriminate use of the word "replica." By and by its correct meaning will be lost, and it may mean anything material or immaterial, audible or inaudible. Used loosely, as at present, a replica is a copy of a work of art; a reduction, in any material, of a large original in marble or bronze, or a reflection of an object — a tree near a pond; your image in a mirror; a twin, or a leaf! In discussing tone-reproduction recently, F. F. Renwick referred to "a correctly proportioned replica of the tones of the subject." Duplicate, reproduction, copy, counterpart — all sound so prosaic, commonplace; but "replica"! That word is new to most people, has an aristocratic sound and conveys the impression that its user is an erudite person, some one to be regarded with deference and awe. Of course, "replica" will continue to be used in its proper sense by persons who know its true significance, viz., a duplicate of a work of art made by the artist himself.

For Nature-Study Photographers

As I walked among the paths this morning, plucking flowers, I found, in the yellow heart of a lady-slipper, a little brown bee. My first impulse was to shake him out of his honeyed abode, but as I looked at his velvety body and sunlit rainbow-wings a feeling of foolish tenderness surged over me. Perhaps there were baby-bees at home that would starve if papa bee did not bring back honey; and how useful the little creature was, carrying the pollen from flower to flower — so I moved on, leaving him unmolested. But even as I turned away, thinking these pure, sweet thoughts, the damned thing stung me.—E. M. NELSON, in *Smart Set*.

An American Bull

It was a rainy, disagreeable day, and the rooms of the Fregolia Camera Club were deserted save for two members who had sought the seclusion of the "lounge," the more easily to pen their inspirations to the photographic journals. Folinsby wrote his copy entirely from memory; but Smith made occasional use of a book filled with quotations from numerous authors. Said Folinsby, pausing for a few moments, "Smith, who in your opinion is the most prolific writer?" Replied Smith, who had more articles rejected than accepted, "I should say *Ibid*. I find more quotations from him in this book than from any one else."

Wasted Opportunities

How many workers realize that most landscape-subjects that have been "snapped" on the spur of the moment never again engaged the camerist's attention? It is the serious, discriminating camerist who, treating the first picture as a study, returns to the spot — several times, if necessary — photographs the view under improved conditions of light and position and gets an artistic result. Look over your old prints and get busy.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



ONE of the prize-pictures in the "Herald Exhibit," conducted by the *Boston Herald*, and described fully in May PHOTO-ERA, was Orrin D. Howlett's summer-idyl, "Happy Days." It was published in the *Boston Sunday Herald*, early in the spring, occupying a full page. It now appears on this month's PHOTO-ERA cover and on page 73. The significance of the picture is obvious; this, however, refers to the boy, and not to the worm or insect he is adjusting, nor to the fish he hoped to catch. But divorcing our thoughts from such unpleasant subjects, we can imagine the joys of the young sportsman to be out-of-doors, care-free and anticipating a good catch. The cheerful expression of the boy, his personal appearance, the general setting and the genuine summer-feeling are interpreted with true artistic skill. The professional painter, seated at the spot where the camerist stood, scarcely could have surpassed Mr. Howlett's extremely felicitous composition, except by executing it in colors. Data: July, 9 A.M.; faint sun; 5 x 7 view-camera; 16-inch Euryplan; stop, F/11; no color-screen; $\frac{1}{2}$ second; 5 x 7 Orthonon; pyro-soda (thermo-system, half-strength).

Those who have seen Annette Kellermann perform some of her diving-feats will agree that she deserves the distinction to be rated the aquatic artist *par excellence*. Her actions in the swimming-tank suggest the graceful undulating motions of the dolphin, and it is nothing short of wonderful to what degree Miss Kellermann has developed her supple, yielding body to meet the acrobatic tasks she imposes upon it. Equally remarkable is the ability of the photographer to perpetuate one of the many strikingly beautiful postures of this accomplished swimmer, as she appears submerged in the swimming-tank. Aided by flashlight, the lens penetrated first one of the one-inch plates of the huge aquarium and then the mass of water before it reached the figure in suspension. The clearness of detail and the amount of gradation obtained in such circumstances, and without the least distortion, is a feat of which the White Studio may well be proud.

Miss Kellermann's art has been the subject of a delightful pen-picture by George H. Browne—"Annette Kellermann as Unconscious and Persuasive Exemplar of the Theory and Practice of 'Kinesthesia.'" It appeared in the *Boston Evening Transcript* of May 12, 1917, together with several photographic reproductions of Miss Kellermann performing in the tank. The original photograph of one of these attitudes, courteously lent us by the *Transcript*, is reproduced in this issue, and would seem to justify the praise accorded it by art-critics and technical experts. Mr. Browne's analysis of his subject's art was based on impressions gained from attending a Kellermann performance at New York's largest theater. Let me quote a few paragraphs from this interesting article:

"Through a high rocky gorge, a boisterous cascade tumbles into a line of big glass-tanks, in which mermaids are playing, diving, and swimming through coral rings. Suddenly, the 'Queen of the Mermaids' slides down the cliff into the deepest tank, turns whirling somersaults forward and backward, her lithe body curved backward almost into a complete hoop, and then sways to and fro in fascinating undulations and oscillations—all under water. . . . The most noticeable

feature of Miss Kellermann's diving, after its perfect form and finish, is her quick recovery to perform some underwater-evolution. Most divers have to come up to the surface immediately; her mermaids, to stay down, all have to wear lead belts; but her control of her breathing is so complete that she can stay at the bottom, or stop half-way up, or at any glass-panel, at will, simply by exhaling air. Says Miss Kellermann: 'I could stay under water twenty-four hours and be perfectly comfortable—if I had breath. The experience of complete relaxation, of being perfectly sustained in a soft, yielding, pleasant element like water, has a psychological effect that may account for the acknowledged great physical benefits of swimming.'

Data: Made with camera in front of the tank; latter composed of 1 $\frac{1}{4}$ and 1 $\frac{1}{2}$ inch polished plate-glass; flashlight; Goerz 7 A Dagor; stop, F/16; about $\frac{1}{2}$ second.

Several excellent articles on the use of the pocket-camera for pictorial work have appeared in the pages of PHOTO-ERA, but none more practical and comprehensive than the current one by William S. Davis. Data: "The Tempest," page 57—November, 2 P.M.; good sunshine; stop, F/8; Ingento "A" ray-filter; $\frac{2}{5}$ second; Ansco Speedex film. "The White Church," page 58—October, 1 P.M.; bright sun on subject; stop, F/8; Ingento "A" (3-time) ray-filter; Vulcan film; $\frac{1}{10}$ second. "Snug from Winter's Blast," page 58—in bright sunshine, at 10 A.M., last winter; Speedex film; stop, F/11; same filter; $\frac{1}{10}$ second. "Chinese Lilies," page 59—made by diffused light, indoors, last January; subject four feet from lens; Speedex film; stop, F/32; 30 seconds. "Autumn-Fields," page 60—October, 4.25 P.M.; clear sun; stop, F/11; Speedex film; $\frac{1}{10}$ second. All the exposures were developed with pyro of a strength to give the desired quality in about 10 minutes' time.

"Take back your golden fiddles," page 61, is a good example of a view made in two separate sections and the prints closely joined together, slightly retouched. The result is as satisfactory as if the photographer (an amateur) had used one of the several types of panoramic cameras on the market. Data: September 1, 1916, 3.30 P.M.; bright sun; 4 x 5 Graflex; $\frac{1}{2}$ -inch Voigtlander & Son's Heliar F/4.5; stop, F/16; no color-screen; $\frac{2}{5}$ second; Imperial Non-Filter; M.Q. tube; two 4 x 5 Cyko prints mounted close together on one card.

The five pictures that appear on pages 63, 64, 67, 69 and 70 are taken from a portfolio of sixteen prints assembled by members of Tenkyu-kwai, a Japanese coterie of amateur pictorialists, at Tokio, Japan. This portfolio and its contents were described fully in February PHOTO-ERA. The striking pictorial quality of these prints is quite obvious, as well as the sincerity of motive, and characteristically refined artistic taste and breadth of treatment. No data.

In Mr. Hanna's spectacular arrangement of cloud-forms, page 75, much of the significance of the picture is left to the imagination of the beholder. Considered pictorially, the effect is singularly well balanced, and the contrasting masses, as they portray a mighty physical conflict, high above the earth, gain rather than lose by the strongly defined chiaroscuro. Data: August, about 5 P.M.; sun behind clouds; 3A Graphic; $\frac{1}{2}$ -inch Goerz Dagor; stop, U. S. 4; (5-time) Goerz ray-filter;

$\frac{1}{10}$ second; Premo film-pack; Pyro in tank; Standard C Bromide.

The summer-resort, Jaffrey, in the southern part of New Hampshire, owes much of its popularity to its proximity to Mt. Monadnock, the surrounding mountain-ranges and lakes of great beauty, and extremely satisfactory hotel-accommodations. It is reached easily by the Fitchburg system of the Boston & Maine and connecting lines. The group of Jaffrey views, page 77, is composed of photo-postcards — by Charles A. Bean, a professional photographer — that I happened to have. Unfortunately, Mt. Monadnock, the picturesque half-way house, Dublin, Lake Monadnock and other characteristic places of this favorite locality, are not here represented; but these few modest glimpses suffice to indicate the general attractiveness of Jaffrey in the interest of the vacationist, the tourist and the camerist. Data: "Twin-Elms"—June 12, 10 A.M.; clear; 5 x 7 Premo, kitted; Goerz lens, at F/32; $\frac{1}{2}$ second; Eastman plate; ditto M. Q. developer; direct Azo print. "Town Hall from Endicott Garden"—June 14, 1.30 P.M.; bright; other details the same. "Mountain Road"—July 7, 3.30 P.M.; other details the same. "Approach to the Ark"—June 10, 11 A.M.; other details the same.

Though fond of portraying striking effects of earth and sky—as exemplified frequently in the pages of PHOTO-ERA—H. C. Mann makes occasional excursions into the field of flower-photography, where his technical knowledge stands him in good stead. This is evidenced in his study of hollyhocks, page 80. Here these showy flowers are used in a sumptuously decorative fashion, planted about the entrance of a porch, the effect being very picturesque. Data: Summer-afternoon; good light; 8 x 10 Century camera; 12-inch Goerz Dagor; stop, F/8; B. & J. 3-time ray-filter; $\frac{1}{25}$ second—short, on account of wind; Hammer Non-Hal. Ortho.; pyro; 8 x 10 Azo print.

It is now generally conceded that the art of motion-picture photography includes artistic effects that are next to impossible to obtain in the regular way. I do not mean to compare the two methods, as that would be unfair, but individual (single) exposures in cinematography with those taken with a regular camera. In figure-work, this is strikingly true, for the reason that a motion-picture actor has few opportunities to pose, and, consequently, each movement, each gesture, is natural and unstudied. Of course, it does not follow that the action of any actor is graceful throughout, unless intended to be otherwise; although it would be difficult to discover a motion-picture star, particularly a woman, whose every gesture did not spell grace. The picture of Mahel Normand, a noted motion-picture star, grouped with a little girl—page 82—is typical of the pictorial excellence and spontaneous action and expression that characterize high-class cinematography; but though part of a reel (comprising 1,600 tiny pictures) made by the regular camera-man, this particular exposure was made by a "still-photographer," with the aid of a standard plate-camera (either $6\frac{1}{2}$ x $8\frac{1}{2}$ or 8 x 10), at the moment indicated by the manager, and for the purpose of book-illustration or advertising.

Advanced Workers' Competition

ALTHOUGH H. B. Rudolph's humorous snapshot of diving boys, page 85, would have an appropriate entry in the July competition, "Landscapes with Figures," or in the one following, "The Spirit of Summer," it is welcome as an independent offer, earlier in the season, for the warm weather, with its cooling sports, is virtually here. The entry of the youngsters in the invigorating waters is strikingly suggestive of a group of

leaping frogs after being surprised. Mr. Rudolph, a frequent prize-winner in our competitions, has managed a novel and difficult pictorial theme with uncommon success. The spirit of summer is unmistakable in this well-chosen setting for the boy's frolic, the atmospheric perspective and cloud-filled sky. Data: September 1, 11 A.M.; hazy; 5 x 7 Century; 7-inch Euryplan Anastigmat; stop, F/6.3; $\frac{1}{320}$ second; Multi-Speed shutter; 5 x 7 Stanley; metol-hydro, tray; Royal Bromide Rough print; Kathol Hydro.

E. M. Pratt's "Sunset," page 87, appears like a dreamy vision—placid, elusive, mysterious. The composition is delightfully artistic and the technical qualities admirably fitting. The slight diffusion of detail is strikingly appropriate in a theme of this character—a lesson well to be remembered by devotees of soft-focus work. Data: March 20, 1917, 6.30 P.M.; dull, cloudy; $3\frac{1}{2}$ x $4\frac{1}{2}$ Sanderson; Struss Pictorial; 8-inch focus; stop, F/5.5; 3-time color-screen; $\frac{1}{2}$ second; Standard Orthonon; Rodinal in tank; 1 in 100=64 minutes; print, 8 x 10, enlarged on Artura Carbon Black (Grade E).

"Greasing the Wheel," page 88, is a capital and interesting genre. The illumination is not the least technical merit of this pleasing and unconventional theme. Perhaps one might wish that the wagon with its prop were a little less prominent in the pictorial-scheme—a condition easily modified by screening the light or in making the print; but, unless accomplished with extreme skill, better left undone. Data: 9 A.M.; 8 x 10 view-camera; 12-inch R. R. lens, at F/11; Standard Imperial; pyro; direct (8 x 10) print on Artura Iris C.

Beginners' Competition

PERHAPS no portrait to appear in these pages will prove of greater interest than that of Dr. T. W. Kilmer, the eminent amateur-photographer, whose illustrated treatise on portraiture, published in November PHOTO-ERA, 1916, is regarded as highly authoritative in photographic literature. It appears, as the most successful entry in the Beginners' Competition for May, on page 91. As the picture is the work of the subject's son, it may be inferred that the youthful artist has had exceptional advantages to be trained in the difficult art of photographic portraiture. To what degree the senior Kilmer is to be credited for his judicious appearance as a model is not disclosed, for here's no opportunity to display the *bête blanche* of the photo-portraitist, viz., a broad white collar; but the photographer is to be praised for his skill in handling a difficult problem. The drawing and modeling are excellent—though perhaps the face is in a trifle too high a key; and some may feel the need of a broader margin at the top and sides. Data: 8 x 10 Eastman view-camera; 18-inch Verito; stop, F/5.6; Cooper Hewitt Light; 5 seconds; 8 x 10 Stanley; pyro-soda; direct print on Artura E.

H. M. Biggin deserves credit for capturing—if he did not originate—an unusual subject, page 93. The composition is admirable throughout, without particular respect to the selection and management of the setting and the grouping of the models. The ladies might easily have been arrayed incongruously, and thus marred the photographic design. The fact that they harmonize completely with the artist's intentions, and that other details have adapted themselves to his wishes, reveals highly developed pictorial ability in behalf of Mr. Biggin. Data: May, 11 A.M.; 4 x 5 Wizard camera; 6-inch R.R. lens; stop, F/8; no color-screen; good light; $\frac{1}{25}$ second; Seed 26; pyro, tray; enlarged on Royal Bromide.

(Continued on page 102)



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



Henry S. Smith

HENRY S. SMITH, one of the founders in Boston of the firm of Pinkham & Smith, now the Pinkham & Smith Company, of which he had been vice-president, died on Thursday, at his home in Everett, following illness which began when he had a severe paralytic shock in July, six years ago. Since then several recurrent shocks had steadily undermined his former rugged health and unusual physique. Mr. Smith was a man of powerful build, was six feet, two inches or more in height, and was of strong constitution previous to the time when he first was stricken.

Mr. Smith was born in Webster on September 6, 1867, the son of Henry S. Smith and Sarah M. (Davis) Smith. He attended schools in Webster, and then went to Worcester Academy, after which he began to learn the optical business under H. N. Vinton and the American Optical Company, in Southbridge. He carefully mastered the details of the work, and thirty years ago came to Boston, and for nine years was with Andrew J. Lloyd Company as foreman of the shop. Then, with William F. Pinkham, who was head of the sales-force at Lloyd's, Mr. Smith formed the firm of Pinkham & Smith, and when this later became incorporated as a company, Mr. Smith became the vice-president.

He was widely recognized as an authority and expert in optical and photographic lenses. He originated the Smith soft-focus lens, used widely by photographers for pictorial work. Personally, Mr. Smith was democratic, frank and honest, placing a high value on business-integrity and loyalty to principle. He is survived by a widow and two sons.

The London Salon in America

AFTER many delays in mails, we have at length heard that the collection of pictures by members of the London Salon of Photography, which was sent to America at the end of last year, has duly arrived at San Francisco; and although too late for the Salon of the California Camera Club, the pictures are being specially exhibited as a complete show in themselves. They appear to have aroused a great wave of enthusiasm among the American workers on the Pacific Coast, and there are two outstanding notes which are struck in the reports and letters to hand. First, this exhibition of British pictorial photography is receiving a welcome and appreciation on the other side of the Atlantic equal to any which we have accorded to American work in London; and it is interesting to note that in many cases work which has been regarded as "old-fashioned" here is greeted as something new and perfect out there. Secondly, the outspoken admiration of many of the leading workers of California for the straightforward characteristics and pictorial quality of the work of the members of the London Salon, as opposed to the tendency to "fuzziness" and the all-pervading fashion of using the soft-focus lens in America, comes somewhat as a surprise. To quote the secretary and chairman of the Californian Salon Committee: "It is years since we had a display of pictures on our walls which have attracted so many visitors or proved of so much interest to students of the art." The collection will be shown in other cities in America. Who says that British pictorial photography is decadent? — *The Amateur Photographer*.

Official Announcement

AFTER careful consideration, looking to the best interests of the Association, the Annual Convention of the P. A. of A. scheduled for Milwaukee, September 3 to 8, has been abandoned by the Executive Board.

The American Congress of Photography will meet on Friday and Saturday, August 3 and 4, at Cedar Point, immediately following the Ohio-Michigan-Indiana Convention.

The Congress will outline the work to be taken up by the P. A. of A. for the coming year.

RYLAND W. PHILLIPS,
President P. A. of A.

The reasons given officially for this decision are briefly the following: "Transportation facilities in this country are tied up to an alarming extent. In fact, the War Department has issued orders to give preference to all freight of war nature. Many of our large exhibitors felt that it was virtually impossible for them to get their shows to Milwaukee with any degree of certainty that they would be delivered on time for the Convention. The Board felt that the movement of troops at about the time for our Convention would tend further to make the transportation facilities even worse than they are at present. At about that time, too, the photographers will be as busy as they can be photographing the soldier-boys. Everything pointed to the fact that a Convention this year would be below normal in attendance and in exhibits. When the Board had the matter under consideration, the Secretary of War issued an official notice that large gatherings of people should not be brought together so as to further cramp transportation facilities except in cases where it was absolutely necessary. Taking all these facts into consideration, the Board deemed it not only wise but their patriotic duty to help conserve the energies of the country by not holding a Convention this year; for it is not absolutely essential that it be held, and it would not help the country in any way whatsoever in the present conflict. The only strong argument in favor of holding the Convention was that which has been presented recently to overcome the tendency toward too much economy, which argument is tersely given in the slogan 'Business as Usual;' but the Board believes that the other arguments against holding the Convention outweigh the importance of this argument for holding it."

To Teach Technical Optics

AN important step in advance is now being made by England with regard to Technical Optics. The United States would do well to follow the example. According to the *Amateur Photographer*, arrangements have been completed recently for an important development in national industry on the scientific side, by the establishment of a new department of Technical Optics in connection with the Imperial College of Science and Technology at South Kensington. The department in question forms part of a larger scheme adopted by the London County Council in August last for the provision of instruction in this most important subject, including post-graduate and research-work at the Imperial College, a trade-school, and senior day and technical courses at the Northampton Institute, and junior

technical courses at two junior technical institutions, one in North London and one in South London. The new department is under the management of a Technical Optics Committee, of which the Right Hon. Arthur H. D. Acland is chairman, and which at present consists of thirteen members representing the Admiralty, the Army Council, the Ministry of Munitions, the Royal Society, the National Physical Laboratory, employers in the optical trades, glass-manufacturers and the Imperial College; and two more members have yet to be elected representative of glass-workers and metal-workers. The same committee appointed by the L. C. C. is also an Advisory Committee to the Council. Mr. Frederic J. Cheshire has been appointed head of the new department at the Imperial College for a period of five years, and the title Director of Technical Optics, and Professor of Technical Optics at the Imperial College. Mr. Cheshire has been associated with optical instruments for many years at the Patent Office, and since the formation of the Ministry of Munitions has been Deputy Director-General of the Ministry and Technical Director of the Optical Department of the Ministry. He is the present President of the Optical Society.

The Portland Camera-Club Show

THE Portland (Maine) Camera-Club, member of the Intercity Club Print Exchange, comprising ten clubs, held an exhibition of prints by its members at the Y. M. C. Union Camera-Club, Boston, Mass., during the first two weeks in July. The exhibit consisted of twenty-six prints, most of which displayed artistic and technical merit of an exceptionally high order, and must have afforded much pleasure and instruction to those that were privileged to see them. Of special interest were ten gum-prints of varying degrees of excellence, those by Dr. Rupert S. Lovejoy being not only the best in motive and execution, but of decided Salon quality. His "Hill-Top," a near landscape of noble design and tonal beauty, was Japanese in feeling, and impressed us as the finest picture in the entire collection. A winter-scene, another gum by the same artist, entitled "Winter Decoration," was well balanced in tone and line, and superbly executed. F. C. Libby displayed true artistic temperament in "Birches of Kennebec," atmospheric and imaginative in quality; in "When the Earth was Young," a nude boy fishing with rod of primitive construction, and in "Mist, Spray and Roaring Waters" (Niagara Falls?). Other good gums were by E. Roy Monroe — "A Quiet Stream" and "Sundown."

Among the straight enlargements, W. T. Starr was a conspicuous exhibitor, with his "The Idler," a boy asleep on a box, "A Windy Day" and "The Breaker," all of which have won distinguished honors in PHOTO-ERA competitions, and have been reproduced in past issues. His pictures have the true artistic ring and pictorial discrimination. Among the several marines, "The Wave," by Joseph B. Kahill, gave genuine pleasure by reason of its realism, artistic proportions and admirable tonal value. "Sunlit Spray," by C. M. Jacquith, impressed as an effective and harmonious prospect of water and clouds. H. A. Peabody had several admirable prints — "Desert-Thirst," a man refreshing himself from a bottle, alone in some desert waste, and a picturesque landscape viewed through a group of slender trees, entitled, "Bend in the River." Horace A. Latimer, past-master in nearly every known method of photographic expression, and prolific producer of camera-pictures from almost every clime, was represented by a superb view of Carnarvon Castle, Wales, and a character-study of an

old woman tasting fruit. George MacDonald showed "The Shadowed Doorway," a superb effect of light and shade. A winter-scene in the woods, by Frank A. Faught, displayed a fine appreciation of the artistic possibilities of the subject. "A Study in Black and White," by Roger Jordan, pictured a young girl with jet-black hair (white lace collar and cuffs), dress and pumps, bare legs and short white stockings — an exceedingly consistent and striking effort.

Altogether, the collection does credit to the members of the Portland Camera-Club, and deserves to be seen on the walls of every progressive camera-club in the United States.

Our Illustrations

(Continued from page 100)

It is not the fortune of every climber of Mt. Washington to find the favorable camera-conditions as pictured by B. I. Orne, on page 94. Snow and ice glorify the summit of this the highest peak in the White Mountains, of New Hampshire, and, to complete Mr. Orne's picture, strata of clouds and mist assert themselves in picturesque forms. The picture received official recognition in the "Herald Exhibit" held last spring, and referred to in this column in previous issues. Data: September, 8 A.M.; bright light; Goerz Tenax camera ($3\frac{1}{2} \times 4\frac{1}{2}$); Dagor lens, $4\frac{3}{4}$ -inch focus; stop, F/6.8; no color-screen; $\frac{1}{60}$ second; Eastman N. C. film; pyro in tank; P. M. C. Bromide enlargement.

Remember the London Salon!

DESPITE the war and conditions of a most discouraging nature, the photographers who compose the London Salon of Photography have carried on their work without interruption. Such devotion to the cause of pictorial photography on the part of our English brethren merits the hearty and immediate support of every American pictorialist. The Salon of a year ago proved to be a pronounced success, and now the stronger tie which binds English and American photographers should make this year's Salon the best ever held. Owing to a tardy decision with regard to the importation of pictures into England, a delay occurred in issuing the entry-blanks. However, these are on their way and may be obtained from PHOTO-ERA on request. Nevertheless, as transatlantic travel is precarious, we believe that rather than delay the dispatch of the pictures, it would be well for the American exhibitor to make out his own entry-blank, which will be accepted. It has been announced, officially, that the regular mail may be used to send prints to the exhibition if the limit of seven pounds of weight is not exceeded; i. e., first-class and third-class mail and parcel-post may be employed. Conditions and rules governing last year's Salon are virtually the same, with the important difference that this year all pictures must be sent *unframed* and *unmounted*. Under these conditions they will be permitted to enter England — subject to censorship. Particulars with regard to the prints submitted should be sent under separate cover accompanied by the entry-fee of 2s. 6d. (60c.) and addressed to the Hon. Sec., Mr. J. H. Anderson, London Salon of Photography, 5a, Pall Mall East, London, S. W. 1, England. We cannot urge American workers too strongly to send their best prints without delay, and thus show our English friends that we in America know how to give them cordial and loyal support. Though the time is short let us display some characteristic Yankee hustle and see to it that a display of representative American pictures reaches England in perfect order — in strict accordance with the rules — and *on time!*



WITH THE TRADE



"Anscoing America"

THE new Ansco 1917 amateur-camera catalog, "Anscoing America," is ready for distribution through photo-dealers or direct from the Ansco Company, Binghamton, New York. The catalog consists of sixty-four pages devoted to the listing and the description of Ansco cameras, films, Cyko paper and accessories. The illustrations and marginal drawings are excellent. We call attention particularly to the valuable tables devoted to the Depth of Focus and Lens-Speeds of the different lenses used on Ansco cameras. The miniature cameras comprising the Ansco vest-pocket series are listed with a variety of lenses suited to any amateur photographic requirement. The larger-size cameras are also well represented, and offer the purchaser several attractive and efficient equipments.

Rexo 1917 Catalog

WITHOUT a doubt, the Rexo 1917 Catalog is the most attractive one issued to date by Burke & James, Inc. In it will be found a complete and interesting description of Rexo goods, which include cameras, films, paper and many excellent photo-accessories. The new $1\frac{1}{2} \times 2\frac{1}{2}$ Vest-Pocket Rexo is listed with seven different lens-equipments. One of its features is that the camera-body is constructed of a new substance known as Bakelite—strong, light, durable, more substantial than hard rubber, and handsomer than most metals used heretofore. The Rexo Telegauge is an excellent instrument for measuring distances, and it should be invaluable to amateurs who lack the knack to estimate distances correctly. Copies may be had from dealers, or direct from Burke & James, Inc., 240 East Ontario Street, Chicago, Ill.

New Address of the Cooper Hewitt Philadelphia Office

THE Philadelphia office of the Cooper Hewitt Electric Company, manufacturers of mercury-vapor lamps, has been moved from 124 South 8th Street to the Drexel Building. The company hopes that the change will enable it to handle its Philadelphia business with increased efficiency and dispatch.

Havers & Fagan Discontinue Business

THE New York Camera Exchange has purchased the goodwill, stock and fixtures of the Havers & Fagan, Inc., concern, of 120 Fulton Street, New York, from the receiver, G. C. Gennert, June 28. The New York Camera Exchange is continuing the said business for an indefinite time.

The Photo-Dealer's Opportunity

AMERICAN photo-supply dealers will do well to profit by the excellent example set them by the British dealers. With conditions far more critical there than they are here, we find, according to reports, that the photographic manufacturers and dealers of England are carrying on their business successfully and in most cases profitably. They have made the slogan "Business as Usual" a fact and should be justly proud of it.

Within a few weeks, thousands more of Americans are to be turned into soldiers. This means that in thousands of homes the camera will record those who go, and likewise those who remain at home. It means that virtually every member of a soldier's family will be photographed by an amateur or professional photographer. To make these pictures, it will be necessary to buy lenses, cameras, plates, films, paper and chemicals from photo-supply dealers throughout the United States. Not in recent years has photography assumed its present importance with regard to the home-life of the nation. Many who never used a camera will purchase one to photograph those near and dear to them.

It is predicted that professional photographers will have all they can do to meet the demand. In turn, this activity is reflected in the photo-supply houses who sell to photographers. The moment is ripe for the photographic industry of the country to mobilize all the efficiency and service at its command in order to meet the situation. Manufacturers, photo-dealers and photographers should advertise the goods and the service that will appeal directly to those who are vitally interested—the enlisted men and their families.

The Camera-Fiend

M. L. VINCENT

[With apologies to James Whitcomb Riley
—also to the public]

Oh, the Camera-Fiend 's a terror!
You may meet him any day,
As he goes out after pictures
In his careless sort of way.
The "high-brows" and the lowly
Are all alike to him;
He captures victims right and left,
With unrelenting vim.
So when you appear in public,
Heed well what you're about,
Or the Camera-Fiend will get you
If - you - don't - watch - out.

Change in Price of Aurora Life-Studies

THE well-known portfolio of Aurora Life-Studies, decorated plates measuring $9\frac{1}{2} \times 10$ inches, comprising a total of sixty-three halftone reproductions, was sold at \$7.50 until lately. PHOTO-ERA has purchased the remaining copies of this publication and is now selling them at **\$5.00 net**, each.

The set of statuary poses, No. 300, composed of 12 6×10 direct photographic prints on heavy Azo paper, is now sold at \$4.00 net; but together with the portfolio of halftones, at **\$7.75**.

The above **\$7.75**, together with PHOTO-ERA for one year (\$2.00), total \$9.75, for **\$9.50**.

The print-sets B, D, E, F, G, H and I, each composed of 12 8×10 Aurora Life-Studies, semi-draped and in the nude, printed on heavy Azo paper; and print-sets A, C and O, each composed of 20 5×7 prints, like the preceding, continue at \$5.00 each. Any of these sets, with PHOTO-ERA for one year (\$2.00) for **\$6.50**.

Everything except the PHOTO-ERA MAGAZINE is sent by express.



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



PATENT No. 1,231,173, on Photographic Printing-Apparatus, has been granted to Joseph Karl Knapp, of North Platte, Neb., in which the following is claimed: In a device of the class described, a substantially rectangular casing, one side thereof being open, guides formed around said open side, a glass-plate disposed in said guides, a curved spring metal adapted to be positioned over said glass-plate, a flange on one edge of said spring-plate, a spring catch on said casing adapted to spring over said flange, to hold said spring-plate in operative position, and means to light the interior of said casing.

G. C. Beidler, of Oklahoma, Okla., has been granted patent No. 1,230,096 on Developing-Apparatus. The patentee claims as follows: In a developing-apparatus, a conveyer to which film will adhere when wet, means to cause a separation of the conveyer and film, permitting the film to gravitate, a second conveyer consisting of two sections between which the film is fed, means to cause the sections of the conveyer to diverge, and means to cause the sections of the conveyer to travel in a sharp curve to cause a separation of the film and conveyer.

A Photographic Apparatus has been invented by Henry J. Gaisman and patented, the patent number being 1,230,599. The patentee claims as follows: A casing for holding sensitized material for photographic exposure, provided with means adapted to cooperate with a stylus to cause markings on a portion of the sensitized material in autographic characters while said material is protected from the action of actinic light, and also provided with means to expose the marked portion of the sensitized material to the action of actinic light, admitted otherwise than through the aperture by which the photographic exposure is made.

Patent No. 1,230,392 has been granted to William F. Folmer, of Rochester, N. Y., on Photographic Printing-Machine, in which the following is claimed: In a photographic printer, the combination with a printing-table and a swinging platen board adapted to cooperate therewith, of a pivoted operating member arranged to turn on a different center from the platen board, for forcing the latter against the table, said member having a connection with the platen board comprising a member having an L-shaped cam-slot permitting sliding movement of the member during the latter's movement on its pivot and a relatively transverse movement toward the platen board while the latter is in cooperation with the table and a resilient member flexed between the operating member and the platen board during said last-mentioned movement.

A Photographic Printing-Device has been invented and patented by Edward C. Sterling, of Beaver Falls, Pa., the number of the patent being No. 1,230,532. The patentee claims as follows: A device of the character described, comprising a receptacle, a lamp located in said receptacle, means at the upper extremity of said receptacle adapted to receive a negative and a sheet of sensitized paper, a hinged cover upon said receptacle adapted to clamp the negative and paper in position, said cover comprising a member hingedly connected to said receptacle and an operating-handle hingedly connected to said receptacle and hingedly connected to the free edge of said second hinged member.

Clarence B. Knott, of New York, N. Y., has been granted patent No. 1,232,333 on Focusing-Device for Cameras, in which the following is claimed: The combination with a camera lens and plate, of a movable and a fixed reflector capable of receiving and reflecting to the eye the entire portion of the view or object destined to be brought to a focus on the film or plate, and means operable at the will of the operator interposed between said reflectors for centering the entire field as seen upon the fixed reflector thereupon.

Patent No. 1,232,125 on Camera has been invented by Alfred L. Trippel, of Miami, Ariz. The patentee claims as follows: In a camera, including a lens and a focusing-screen; an unexposed-film carrier, a rewind key for said last-named carrier, and means, operable by said key, to move one of said carriers across the face of said screen to expose a desired portion thereof to said lens.

A Camera-Carriage has been patented as No. 1,213,544, by William A. Riddell, of Rochester, N. Y.

Frank A. Binder, of New York, N. Y., has been granted patent No. 1,213,489, on a Photographic Developing-Apparatus.

Patent No. 1,212,884, on Automatie Apparatus for Aërial Photography, has recently been granted to Auguste Blaise Baron and Charles Marie Arthur Guinard, of Paris, France.

To Remove Pyro-Stains from Finger-Nails

A CONTRIBUTOR to the *Professional Photographer* gives the following method to remove pyro-stains from the finger-nails. Directly after developing, and before drying the hands, rub common salt well onto the nails with the thumb until the stains disappear. Do not scrape the nails, as it makes them so susceptible to the pyro that future stains are likely to be permanent.

What is Formalin?

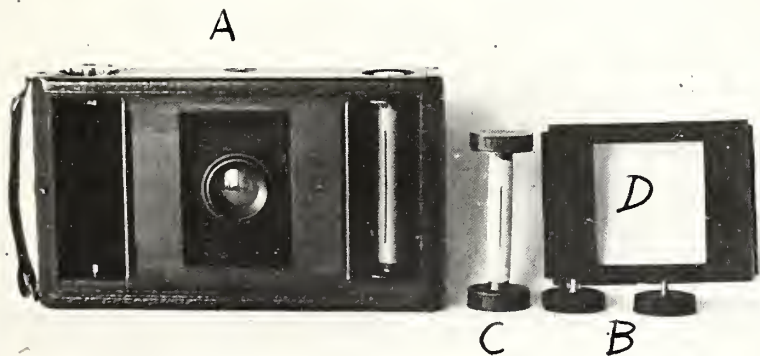
A VALUABLE definition of Formalin is given by F. C., in the *Amateur Photographer*. "Formalin is a 40-percent solution of a pungent colorless gas called formic aldehyde or formaldehyde. Why so called? Aldehyde is an abbreviation (like pyro, hypo, etc.); viz., *al* (cohol) *dchyd* (rogenatum), i. e., alcohol from which hydrogen has been removed. This accords with its chemical constitution; i. e., $\text{CH}_3\text{HO}-\text{H}_2=\text{HCHO}$, i. e., methyl alcohol minus hydrogen gives formic aldehyd. But why formic? If to formaldehyde we add oxygen we get $\text{H}_2\text{CO}_2\text{H}$, i. e., formic acid, first extracted from red ants, also nettles. *Formica* is Latin for this lively insect. Formic acid is one of the many things suggested as a pyro-preservative, but offers no special advantages. It is usually prepared from glycerine and tannic acid, the latter used as a developer in the early days of photography. Formalin is commercially prepared by a secret process cheaply, but can be produced in various other ways. It is a valuable antiseptic and food-preservative. If sprayed on the window-sills it will banish flies, who shun its pungent odor. Its vapor (gas) should not be inhaled or brought near the eyes. It reacts with sodiumsulphite, forming caustic-soda, and thus is used in connection with hydroquinone as an energetic strong-contrast-giving developer."

Using Smaller Film

ALMOST every user of a roll-film camera at some time has wished that he could use a smaller size film. With the average amateur this is especially true. He often finds that the number of pictures that he wishes to make is beyond his means. And, again, many subjects require but a small portion of the film. For example; in airplane-pictures, with the lens-equipment on the average film-camera the airplane is lost in a vast expanse of sky.

Since I am rather inclined "to snap everything," and since my pocket-book is often very light, my reasons for seeking a film-reducing device were for economical reasons. This device is not merely an idea — I have used it for over a year, and have made many reduced-size pictures. By its use, I have made in a No. 3 film-camera $2\frac{1}{2} \times 2\frac{1}{4}$, $2\frac{1}{2} \times 1\frac{1}{4}$ and $2\frac{1}{4} \times 3\frac{1}{4}$ pictures, using

and center the smaller spools. These could be turned out easily of aluminum or vulcanized fiber in one piece by a person having access to a small lathe. But they may be made quickly and easily by sawing off both ends of an empty spindle to such length that when the size to be adapted is placed between the two, the complete length will be about $\frac{3}{4}$ of an inch shorter than the length of the spindles used in the camera. Over these ends, and flush with the sawed-off portion, a wooden washer the size of the metal end is placed and fastened with glue. On this washer is fastened, by means of small screws, a round metal-plate, having in its center a metal-spindle to hold the film. A brass-screw sawed off, put through the plate and soldered on the reverse side works very well. One holder of each pair must have the spindle slotted and a small metal key soldered in. This is to hold the cartridge so that the winding-key and tension-springs will grip properly.



CAMERA EQUIPPED FOR SMALLER FILM

CHAS. G. STRUBE, JR.

No. 1A film for the first two sizes and No. 3 film for the last. And this offers a further advantage: the making of twenty-four exposures on a twelve-exposure film. Many times the chance of a good picture is lost in the time taken to reload. Owing to the difference in size and construction of cameras, no definite details can be given; but a general description will enable any one to construct a device to fit his camera.

The first attachment consists of a mask made of blackened cardboard or thin sheet-fiber. This mask is cut with the desired opening, and of such outside size that it may be fastened easily over the camera-opening by means of gummed strips. Half the size of the regular picture plus half the margin between two negatives makes a satisfactory size to work with. In using this device, the regular size film is used, and the safe-paper of each film is marked between every two exposure-numbers. After marking a film or two, the user will find that he can mark easily a half-dozen rolls in fifteen minutes. A camera fitted with mask to make half-size pictures is shown at A.

The second device, shown at B, C and D, consists of four holders for smaller film cartridges and a mask of the desired size. The spool ends are extensions to hold

A coat of dead-black varnish will give the adapters a finished appearance. The adapters are shown at B and C. The type of mask used is shown at D. These adapters may be worked out for any size camera; but care must be taken that the adapted film is numbered on the same side as that intended for use in the camera. In using film considerably narrower than that intended for use in the camera, it is advisable to paste a small piece of opaque paper over a portion of the window through which the exposure numbers are seen.

A person wishing to use half or some other portion of the original size, and not wishing to mark each film, could probably work out a device to put on the winding-key much on the order of the film-economizers which were on the market some time ago.

CHAS. G. STRUBE, JR.

Few cities compare with Boston in wealth of camera-material. The park-systems, including Middlesex Fells, Back Bay Fens and the chain of streams and ponds from here to Jamaica Pond, offer an endless variety of views peerless in pictorial charm. And there are no restrictions of Federal or State authorities.



THERE have been many exhibitions of war-photographs in London, and never one that has not had a crowded attendance and been kept open beyond its advertised time. There is now a gigantic exhibition open at the Victoria and Albert Museum, of the Allied War-Photographs. It is free to the public, and, in the words of its advertisement, is a "record of the war on land, on sea and in the air." It is an extremely impressive and comprehensive show, and of thrilling interest, for the camera is so ruthlessly realistic, and is the most unprejudiced of historians.

This unique collection of photographs, taken by men of different nationalities, has the one object to portray the war from the side of the Allies, yet allows the characteristics of the various races to find play. For instance, the Italian pictures are filled with beauty, not only of landscape, but in conception, and it gives us a shock to see the evidence of the grim fight disfiguring the grand, towering mountains we have known and loved. The French, too, seem to be able to select the subjects that not only tell a tale, but make a picture. The British group occupies two rooms. In technique the photographs are in no way behind the French, and they impress with a determined and business-like energy, which to us, who sit at home, is pleasantly reassuring.

It is impossible to digest the whole exhibition in one visit. There is too much of it, for so many of the pictures repay more than a quick glance, and by careful study reveal many secrets in the way the camera alone can divulge. Some print that escaped us at our first hurried look will yield quite an interesting bit of information on a second and more leisurely inspection. We had been so taken up with the foreground of the print that we had quite overlooked the bridge running out of the picture at the top, which had figures on it, and yet the nationalities of these mysterious people make all the difference in the world to the intrepid men in the foreground.

It is natural that the pictures of war in the air should absorb most of our interest; it is difficult to get away from the attraction of flying. Only last week we were fascinated and absorbed by the sight of a squadron of fifteen or sixteen German airplanes, painted to match the whitest of clouds, and visible only when their background was the pale-blue sky. They were at an astounding height and right above us; but not living in a congested district, we received no bombs, which were dropped, however, half an hour later amidst the shopping crowd of women and children in the narrow streets of a seaside-town. The sight, however, is only photographed on our brains, and we must hasten back to the actual photographs at the Museum.

"The Zollern Redoubt" frame is one of a series that may have cost lives to obtain but which have contributed enormously to our successful advances, and been the means to save a great many lives, for every plan of attack is dependent on the information which can be "read" by experts from these photographs. They reveal not only the enemy-positions, but his barbed wires, his railways, his ammunition-dumps, etc.; but differentiate cleverly between "camouflage" of all kinds and the real thing. But it is useless for the uninitiated to look at many of these air-photographs without clear and explicit notes as to what they reveal and mean. We presume that our new Allies, to whom these notes are addressed, will later have the opportunity to see these marvelous representations of the war exhibited in the States. After they shall have left London,

they are going the round of the provinces, and cannot fail to be of world-wide and permanent interest, for they include English, French, Belgian, Italian, Russian, Rumanian and Serbian examples of the fighting-fronts, and are up to date enough to show American battle-ships and submarine-chasers. Fourteen-inch guns pointing from the turrets remind us cheerily that our friends across the water before long will have something of importance to say on the question of the war.

Mr. Charles F. Inston, who died early in May, was a very well-known figure in English photographic life. He devoted much of his wonderful energy to the Liverpool Amateur Photographic Association, being at one time honorary secretary, and then president. Shipping and sea-subjects attracted him most, and he scored many successes in the early days when successes meant more than they do now, amongst them the R. P. S. medal. One of the present writers once served with him on the Judging-Committee of the Pictorial Section of the Royal Photographic Society's exhibition. Those judging-committees have an immense amount of "stuff" to go through, and often, early in the performance, it seems almost a hopeless undertaking. But these were just the times when Inston's exceptional qualities had their freest scope. Nothing daunted him, and he would with unalterable good temper, frankness and a tremendous "head of steam" attack the biggest blocks of unpromising looking would-be exhibits, and go faithfully through every print. He will be missed in London and the north of England.

Kinemas are certainly the most active form of civilian photography at the present moment, and we should fail in our duty if we did not record the great, politically educative film that is now running at Drury Lane Theater called "Intolerance." In scope it surpasses the famous "Birth of a Nation," and the theme naturally is the intolerance of all ages, mitigated by love and charity. A very timely production!

In spite of war distractions, which are always increasing with us, the Camera-Club manages to draw to its walls, month by month, highly interesting exhibitions. The one just about to be opened is entitled "Photographs of Portraits and Figures, Draped and Undraped," and we hope to refer to it in our next letter.

CARINE AND WILL CADBY.

English Photo-Books Out of Stock

OWING to the unavoidable conditions now existing it is extremely difficult to fill orders for English books on photography. In these circumstances, PHOTO-ERA readers are advised to defer placing orders for these books until American publishing-houses have had an opportunity to replenish their exhausted stocks.

Among the English books difficult to obtain at the present time are the following: Cassell's "Cyclopedia of Photography," by Bernard E. Jones; "Photography of To-day," by H. Chapman Jones; "Photography for the Press," by F. J. Mortimer, F.R.P.S.; "The Oil and Bromoil Processes," by F. J. Mortimer; "Concise Photography," by E. O. Hoppé, and other standard works on photography. Normal service should not be expected until after the war, when fresh supplies will arrive.



(Overheard in the shipping-room of a photo-dealer)
Shipper: "Here's a package going to a man in Warwick, N. Y. I see the papers recommend pronouncing it, 'Warrick.'"

His assistant (a somewhat indolent soul, born in Cork):
"Warrick? Warrick? It dawnt appale to me. Soonds too much like 'work'!"

A Simple Device to Time Exposures

As a regular reader of your magazine, I notice that you describe and illustrate new devices pertaining to photography. I thought you might like to publish photographs and a description of a new simple exposure-device, for which I was granted recently letters-patent. It will obtain correct exposures of timing of films under all conditions of light, and for any day or month of the year.

As you know, the actinic light-value varies greatly between the winter- and summer-months, and in dif-



FIGURE 1

ferent latitudes and the hours of the day. Amateurs accustomed to making pictures in the Central States make trips frequently to the Coast States, where an entirely different light-condition exists, and then come home with complete failures. I have noticed frequently that on a bright summer-day when it took three- or four-seconds' exposure of the testing-paper to match a



FIGURE 2

permanent tint, and the weather changed suddenly to rain, accompanied by heavy clouds, that the exposures would be lengthened thirty or forty seconds.

My device is adapted to the Kodak form of camera, and consists in cementing to the metal-end of the spool of film, a piece or disc of specially prepared bromide-paper which, upon exposure to the light, prints to a decided green tint. On the camera case, I provide a

permanent color-tint for test or comparison. The seconds or minutes required to bring the sensitive testing-portion to match the permanent tint give the user the "light-value," and with this value a simple slide-rule



FIGURE 3

attached to the camera makes correction for the class of subject to be photographed. Figure 1 shows the camera with the spool of film ready to load into the camera. The testing-portion of the end of the spool is protected by a metal-clip. Figure 2 shows how the metal-clip is removed from the end of the spool. This is to enable one to insert the spool into the camera in bright light. Figure 3 shows the opening through the



FIGURE 4

side of the camera, exposing the testing-paper on the spool ready to take the light-value. Figure 4 shows the slit and the paper, which has turned to the color of the permanent tint on the border of the opening. This was printed darker than usual to make it show clearly in the photograph. Figure 5 shows the computing slide-rule on the side of the camera. In exposing the paper through the slit, the user should stand so that direct sunlight does not enter the opening; the sunlight is shaded by the body of the user. Figure 6 shows the empty spool with which the tests were made.

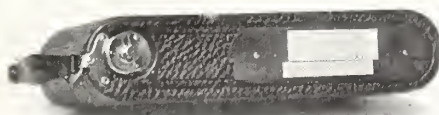


FIGURE 5

To illustrate how easily the device works, expose and count the seconds, "one thousand and one," "one thousand and two," etc. Suppose the count was six seconds; turn to the slide-rule and select the subject to

be photographed, and suppose it to be a "Beach-Scene." Move the narrow-numbered rule on the right until six is opposite "Beach-Scene," and in this position look down to the stop you propose to use—let us say F/8—read opposite this and the number is $\frac{1}{150}$. This gives you an exposure of $\frac{1}{150}$ of a second as the



FIGURE 6

correct speed to set your shutter. But, suppose you wish to use a smaller stop, then read opposite, let us say F/16, and the correct exposure for this stop will be $\frac{1}{35}$ of a second. If instead of a "Beach-Scene" the subject to be photographed is a "Dark Street-Scene," set the narrow-numbered scale with the light-valve—No. 6 as we counted above—opposite the subject "Dark Street-Scene," then read down to the number opposite stop F/8 and we have an exposure of $\frac{1}{35}$ of a second to give our film. Suppose we had—for an illustration—a light-value of thirty-two seconds, late in the afternoon or toward evening, and we wanted to take a group in the shade, "32, Groups in Shade," and we desired to use the full opening of the lens, F/6.3, the exposure would be $\frac{1}{5}$ of a second. I am sure that the camera-public would appreciate such a device, for one of the great difficulties that amateurs have to contend with is to obtain the right exposure.

H. L. IDE.

Secrets of Character Revealed by the Eyes

YOUR character may be shown by your eyes. "There is more shrewdness and keenness of observation with deep-set eyes than with prominent ones," says a physiologist.

"Whatever we perceive is conveyed to the brain by means of the optic nerve. Thus the deeper the eyes are set in the head, the closer their proximity to the brain. The nerve being shorter accounts for a quicker transmission of sensation and sight. A projecting eye more readily receives impressions from surrounding objects. It indicates ready and universal observation, without a lack of close scrutiny and perception of individual things.

"People with deep-set eyes receive more definite and accurate impressions, but they are less readily impressed and less discursive in their views. Round-eyed people see much and live much in the senses, but think less.

"Rolling of the eyeballs indicates unsteadiness of character. The pupil should hold a steady central position, and not move about from right to left and up and down. Honest people always look up and straight before them. Pleasant emotions enlarge the eyeball as well as the pupil. That is why eyes appear larger in youth than in old age. When hope is small, and the disposition becomes anxious and fretful, the eyes shrink, and elderly people's eyes are often very shrunken because they have lost hope at an early age."

Beware of the shifting, faltering eyes that always

look away from you. Small eyes usually mean an alert mind. If they look straight at you, steady and bright, like a squirrel's, you may expect the right sort of cleverness, a quick tongue, and a gift for repartee. But if the small eyes are more dim, and do not look straight into yours, you may look for the wrong kind of cleverness, for little dishonesties and equivocations, and for a business-sharpness that is willing to sacrifice too much for a little money.

Large, "tranquil," "cow-like" eyes, on the other hand, are less responsive than the alert, bright little beady eyes; but, once stir them to their depths, and they will look infinitely more intense and meaningful than the more impulsive eyes. Round, protruding eyes show an ambitious nature and a love of action, temperament of the dreamer. The most beautiful eyes in the world are very clear (that indicates good health) and are set widely apart and rather deep. That width of setting always gives a certain expression of sweet spirituality.—*Newspaper Feature Service, 1917.*

The Best Book on Retouching

MOST of the books that treat on retouching and working on the negatives, with the intention to improve them, are very incomplete and unsatisfactory. Everybody interested has been looking for the ideal book on this important subject, and, considering the opinions expressed by expert professional photographers, PHOTO-ERA takes pleasure in recommending, to professionals as well as to amateurs, the best book on this subject printed in the English language. We refer to the work, "A Complete Treatise on Artistic Retouching, Modeling and Etching," by Clara Weisman—an expert retoucher and, for many years, the head of the retouching-department of one of the largest photographic establishments in this country. The author is by training, experience and temperament well-fitted to treat so difficult a subject as retouching; and admirably, indeed, has she performed her task. Not only does she set forth, at once clear and concise, the principles of sane retouching and their application, but how to avoid the common error of spoiling a likeness and its anatomical aspect by senseless manipulations. She demonstrates the importance of truth in modeling the human face, and illustrates by means of examples the danger of falsifying the results of the lens. On the other hand, there are numerous delightful illustrations of genre and portrait-photography, exemplifying the best principles of the retouching-art which make for the artistic blending of truth and ideality. The author also illustrates how successfully an expression of gloom may be converted into one of happiness, and how other modifications on the negative may be effected by skillful use of pencil and etching-knife, urging only such technical manipulations as may be successfully practised by the retoucher of average ability, her one thought being the attainment of supremely artistic results by easy and sensible methods.

Although the author is a practical artist and a recognized authority in her specialty, she supports her advice with references to well-known art-principles, thus imparting to her words greater value and force. The closing chapter, "Style and Individuality," reveals the author's familiarity with the works of the great painters, and worthily terminates a volume that should be in the hands of every practical worker—professional or amateur. We accord it our heartiest endorsement.

The book is fully illustrated and only a few copies are left. It was published at \$2.50, but will soon be out of print. Copies will be sent by the Publisher of PHOTO-ERA on receipt of \$2.00 each.

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A STUDY
CHARLES WALINGER

PHOTO-ERA

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No. 3

Burson & Condit—Mail-Order Men

MICHAEL GROSS

PROSPERITY was having its usual effect: the octopus of wealth craved room to stretch its cramped tentacles. Messrs. Burson & Condit, happy in the receipt of their first big cheque, which amounted to over five hundred dollars, and represented two months' hard work turning out photographs for a mail-order catalog, now sought for new worlds to conquer.

"The United States Mail must certainly be a good and faithful servant," Burson remarked to Art one morning, as he glanced through a complimentary copy of the finished catalog for which they had made the photographs. "These mail-order people have spent about three thousand dollars getting out this book. It is given away free and still the company grows rich. Why can't we let Uncle Sam make money for us that way?"

"We can," Art answered; "but we'll have to wait until a method is discovered by which we can mail an unexposed plate to some fellow in California, have him photograph himself in his favorite position, and then mail the plate back to us, together with a dollar for every picture he wants made. The day that process is invented, that day will we go into the mail-order business."

"Cease the levity," Burson said sharply. "What I thought of was this. A few summers ago I spent my vacation at my grandmother's house in the country. One day, while glancing through the old family-album—you know grandma lives in the kind of a house that has a best-room, with a hand-woven rug on the floor, a what-not full of fancy oyster-shells in the corner and an immense combination-music-box-picture-album on the table—I came across an old daguerreotype showing an aged man leaning against the horizon, with one hand clutching a sawed-off Corinthian column, and the other plastered over his heart. I asked my grandmother who the gentleman was, and she told me it was the only picture she had of her father. 'It's fading away so fast, though,' she added, 'that I'm afraid it

will soon be gone. If I could only have something done to it, to prevent it fading out completely, I'd give most anything.'

"I assured her that I would make a copy of the picture, and that all the payment I asked would be an extra piece of strawberry-shortcake that evening. She did n't believe that the daguerreotype could be copied; but when I got out my camera, made the negative, and then, later in the day, gave her a finished print, she promised me all the shortcake I could eat. Now here comes the part of the incident that, since then, has given me lots of thought. Grandma showed that copy to her neighbors, and the next day I was besieged with requests to copy old photographs. Of course I refused, for I was trying to get as far away from the demon 'Work' as possible. But lately I've been thinking that if that little town was any evidence of the demand, we ought to be able to build up quite a mail-order business in copying photographs for farm-people. How does it sound?"

Art thought for a few moments, then said: "It certainly 'listens' good. Suppose we try a shot at it? The proposition can be tried out with a thousand letters. That will cost us about fifty dollars, and, just at present, we can risk that sum, win or lose."

The next few days were busy ones for both partners. Burson worked on the circular letter that was to be sent out, while Art scurried around the city, buying stationery, getting a list of names of one thousand farmers and other necessary material. In two days Burson had composed a rough draft of the letter. Then the partners went over it together and whipped it into shape. When finished, it read like a masterpiece. Worded in homely English, so that a farm-woman could take in the meaning at a glance, it opened with a request that she look through her family-album and select such photographs as were fast fading away. After which, all she had to do was to put them into the envelope that was enclosed with

the letter, and mail them to Burson & Condit. They would make three beautiful copies, cabinet-size, and return the copies and the originals to her. If the work was satisfactory, she was to remit one dollar. If the copies did not please her, there would be no charge.

The letter completed, Burson had a thousand mimeographed copies made, and then had the names filled in and the envelopes addressed. The entire batch was mailed on a Friday night, Burson contending that it was best to have the letters reach their destination on Saturday. This would give the housewife all day Sunday to go through her album and select such pictures as she wanted copied. After seeing the letters off, the partners returned to the studio and made all preparations to take care of an avalanche of orders. They cleared all the tables, washed and laid out three of their largest enamel trays, mixed up a fresh hypo bath and then went home.

Monday morning at seven o'clock — the time the postman usually arrived — both boys were at the studio waiting for him. But seven o'clock and seven-thirty passed and still he had not arrived. "Maybe he had to stop and hitch up a horse and wagon to deliver our mail this morning," Burson conjectured.

Art was about to reply when heavy footsteps were heard outside, and both boys jumped up as the postman entered.

"Quite some heavy mail for you folks this morning," he greeted them. "What are you boys doing? Floating stock for a mythical goldmine?"

Too excited to talk, however, the boys did not answer, and, immediately the postman left, they made a simultaneous leap for the letters stacked up on the table. Burson reached the pile first and grabbed up a handful. He gave some to Art and they glanced through the envelopes hurriedly. Then they dropped them and looked at each other in consternation. The envelopes were the identical ones they had sent out, only now, rubber-stamped across the face of each one, was a terse message. **MOVED AND LEFT NO ADDRESS**, some read; others merely bore the word, **DECEASED** or **MOVED**; still others the two words, **NOT HERE**. A large red hand, pointing to the return address, and bearing the words, **RETURN TO SENDER**, also lent its share to the ornamentation.

"That must have been a mighty ancient list you dug up," Burson gasped, as soon as the truth dawned on him. "I'd be willing to wager that Noah used the same names and addresses when he was sending out invitations to the ark."

"The man said it was a brand-new list," Art insisted; "but I remember him mentioning that we would have to expect some 'come-backs,' as

he called them, for there were deaths and removals every day, and no list could stay one hundred percent accurate for very long."

"Well, we certainly managed to hit a terribly unhealthy part of the country. It's a wonder I ever survived my vacation there," Burson countered.

"Maybe there are a few orders mixed in with this batch," Art said hopefully, striving to change the subject.

But a careful search failed to uncover even one solitary order, and Art, seeing the despondent look in Burson's eyes, said cheerfully: "Cheer up; the real returns have n't started to come in yet. Give these women a chance to pick out their pictures, and then watch for a flood of orders."

But the search for faded photographs was evidently a long-enduring one. The next morning's mail brought only two letters — one stamped **DECEASED**, and the other, **WRONG ADDRESS**. The third day brought six more, all stamped, **MOVED AND LEFT NO ADDRESS**.

"Well, there is one consolation," Burson said, as they finished the third morning's mail. "If this keeps up, we will soon be running even. We'll get back just as many letters as we sent out."

The fifth day the luck turned, for the postman left four of the return envelopes that had been enclosed with the circular letter. "Here's the beginning of the avalanche," Burson predicted, as he handed the mail to Art, "and I'm going to let you do the honors." Art accordingly opened the first letter. It contained a sheet of paper and a Kodak snapshot, showing seven people standing in line against an old hedge. Art put the picture down, picked up the letter and read it aloud. "Dear Sirs," — it ran — "this picture is the only one I have of John and myself. John is on one end of the line and I'm on the other. That's because we were angry at each other when this picture was taken. But now we're married, and I'd like you to copy us out. Please have John's arms around me, or else I won't pay for the picture."

There was a long silence, then Burson said: "I think it would be best to write to this lady and refer her to Mr. Dan Cupid. He has arranged for fellows to have their arms around girls since the world started. What's the next one?"

Letter number two contained a picture of a crying baby, with the request that the picture be copied, and to please have the baby laughing and showing all her new teeth, if possible.

"We'll have to pass that one up, too, I'm afraid," Burson said wearily. "We're photographers, please remember, Art, not nursery-maids."

The third letter capped the climax. It con-



"HAVE SOME EATS?"

ROBERT B. M. TAYLOR

tained a picture of a group of people seated around a table. In the foreground, the broad back of a stout man showed. He had evidently turned to speak to some one behind him just as the shutter snapped. The letter stated that the man whose back showed was the writer's husband, and she wanted him taken out of the group — they were all his relatives, and good-for-nothings, anyway — and put in a separate picture. Of course, as long as the photographer was going to lift him out, she wanted her husband turned around so that his face showed.

"Send that one to Thurston, the magician," Burson advised. "Now let me open that last letter, for luck."

Art pushed the fourth letter over and Burson ripped it open. The first thing to fall out was a money-order. Art grabbed it, and saw it was for five dollars. "Here 's the stuff!" he yelled; "four like this a day and I, for one, will be more than satisfied."

Burson glanced at the money-order, verified Art's statement, and then the partners, for sheer joy, indulged in a wild dance around the table.

"Better see what the large-hearted lady wants done," Art finally suggested. "Maybe she wants us to send her the studio-camera and a revolving-tripod for her five dollars."

Burson picked up the letter, read it through, and then dropped it slowly to the table. "I'm going to ask a favor of you, Art," he said quietly.

"Yes, what is it?" Art asked, looking in sad

farewell at the money-order, for something seemed to tell him it was destined for a brief stay.

"We'll have to send this money back," Burson said, "and I'll pay half of it to you personally if you want me to. This letter is from my grandmother," he went on, "the one I was telling you about. She wants five photographs copied and is sending them under separate cover. She evidently does n't know I'm in business, for she says in her letter that she hopes we will make our copies as good as the ones her grandson made for her a few years ago. Bless her dear heart, I can't take her money from her after that, can I, Art?"

Art agreed that to do so would be almost a crime, and accordingly, when the daguerreotypes came in the next day, the boys copied them, put the finished pictures into the finest mounts the studio afforded, and sent them on, together with a long letter from Burson and the compliments of the firm.

On the first day of the next month, while the local post-office in the neighborhood of Burson & Condit's studio was issuing a report to headquarters in Washington to the effect that receipts from the sale of stamps had jumped twelve percent over the sales of the previous month, Art was hurrying to the bank to draw some money with which to pay the rent. Oh, yes! the mail-order business was a paying one, no doubt — but whom did it pay?

A Method To Test Shutter-Speeds

R. V. WILSON

IN this method advantage is taken of the fact that an incandescent lamp illuminated by alternating current gives off a definite number of flashes of light per second. To the eye the effect is of a continuous glow, due to persistence of vision. Alternating electric current derives its name from the fact that the current reverses — first flowing in the wire in one direction and then dying out to zero, and then flowing in the opposite direction and back to zero or no current again. This constitutes what is known as a cycle. Alternating current of sixty cycles means that the above-mentioned operation occurs sixty times every second. With a lamp illuminated by alternating current of sixty cycles, there will be one hundred and twenty flashes of light per second.

This matter of cycles is regulated by the dynamo at the power-station, and the regulation is very exact. In California, for instance, the alternating power supplied by a well-known power-company does not vary during any particular second, between fifty-nine and sixty-one cycles. I am not taking into account the violent and visible surging of the lights as may be noticed some times during a violent storm. This probably will not occur while making a shutter-test, and a check-test will prove it.

In other words, an incandescent lamp fed from sixty-cycle alternating current gives off one hundred and twenty flashes of light every second, although in any particular second it may give off any number of flashes between one hundred and eighteen and one hundred and twenty-two, due to irregular running of the dynamo at the power-station. With lamps of wattage above forty, the filaments are comparatively thick, and do not have time to cool off much between pulsations of current. Take a pencil and wave it rapidly back and forth in the light of a ten-watt lamp — or even a twenty-five-watt lamp — fed by alter-

nating current. You will get a series of flashlight-views of the pencil which will look like the blades of a fan, because the light goes out and part of the time you do not see the pencil at all.

With the help of Figure 1 and this explanation, the method of shutter-testing should be made clear. The ten-watt lamp is enclosed in a light-tight box having a small slot cut in one side so that the light from one — or more — of the filaments may shine through onto the lens, the back of the camera being removed. The aim is to get a



FIGURE 1

R. V. WILSON

bright spot of light, with even edges, focused upon the phonograph turn-table. If the image of the filament itself is focused upon the film, it will make subsequent counting of the flashes difficult, owing to the very small image. A hole is punched in the center of a piece of film and slipped over the small knob on the phonograph in place of a record. The film-edges may be pinned to the felt covering of the turn-table. Start the phonograph going and snap the shutter. The phonograph should be adjusted previously, so that it takes a little over one second to make a complete revolution. If the camera has more than one shutter-speed, all may be taken upon the same film by moving the camera or phonograph slightly, so that the spot of light will fall upon a new portion of the film.

Why not point the camera down at the phonograph and make the tests? The answer is that the

camera-shutter was probably not adjusted to use in that position, and we will give it the benefit of every doubt, so we remove the phonograph from its cabinet and stand it on edge. True, the image might be reflected down onto the phonograph by means of a mirror, but the tendency is to get a double image.

Figure 2 shows a method to use the phonograph in the horizontal position, and the image thrown onto a strip of film mounted upon a tin-can on the turn-table.

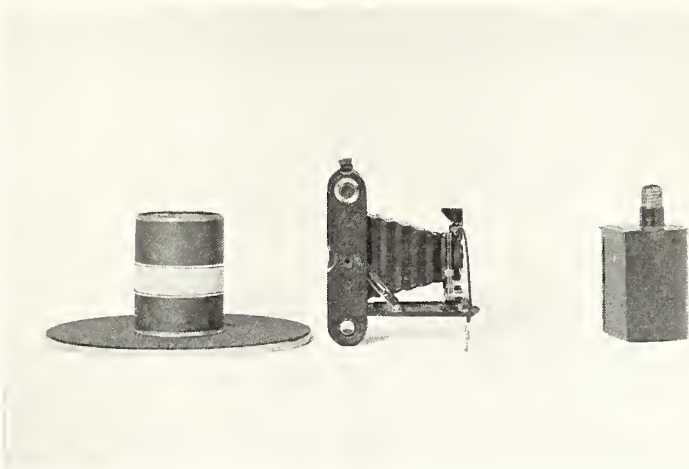


FIGURE 2

R. V. WILSON

The difficulty, here, is in so timing the exposures that they will not come at the joint in the film.

Direct current cannot be used for this method. If you wish to find out if the current in your lamp is direct or alternating, take a magnet and gradually approach one of its poles to the glass globe. If the glowing filament is attracted or repelled, it is fed by direct current. If the filament begins to vibrate rapidly, the current is alternating, and the number of cycles per second is probably marked upon the meter-box. Figure 3 shows some results obtained with a certain automatic shutter after it had come back from the repair-shop. Remember that this method tests the

speed of the shutter and not its *efficiency* or light-transmitting power.

Speed marked on shutter	Theoretical No. of flashes	No. of light-flashes found by test
1 sec.	120	100
$\frac{1}{2}$ sec.	60	55
$\frac{1}{5}$ sec.	24	30
$\frac{1}{10}$ sec.	12	19
$\frac{1}{25}$ sec.	$4\frac{4}{5}$	6
$\frac{1}{50}$ sec.	$2\frac{2}{5}$	2
$\frac{1}{100}$ sec.	$1\frac{1}{5}$	1

The table shows the speeds of 1 and $\frac{1}{2}$ second to be fast; $\frac{1}{5}$, $\frac{1}{10}$ and $\frac{1}{25}$ second to be slow, and $\frac{1}{50}$ and $\frac{1}{100}$ second to be about correct.

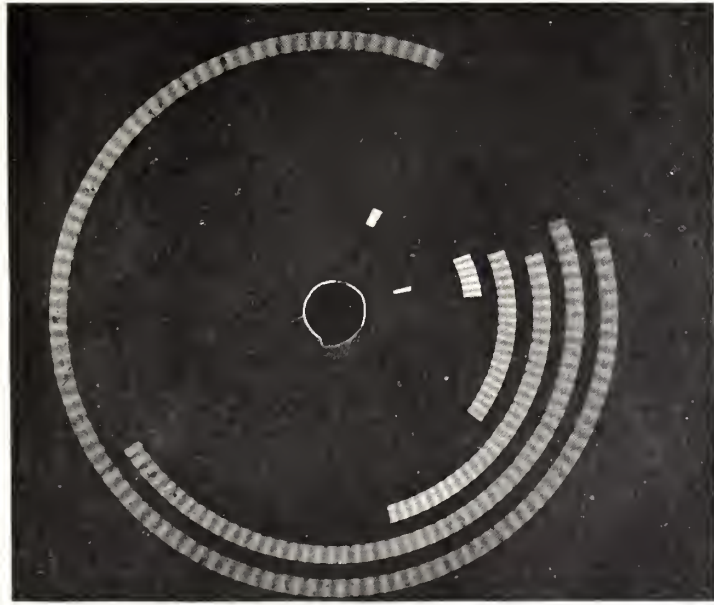


FIGURE 3

R. V. WILSON



THE GOTHICS, ADIRONDACKS, N. Y.

ALEXIS H. FRENCH

Direct Positives on Bromide Paper

TO copy documents rapidly, articles in journals, line drawing, etc., a direct photograph on bromide-paper is very satisfactory if the photograph is made through a prism to avoid reversal. A well-known example is the use of the Photostat machine, in which the operations of development and fixing are performed automatically after exposure in the camera, the paper being cut off from a roll, so that a great number of photographs can be taken in succession. Of course, this method produces a negative, and for much work a negative has no disadvantages. However, on most occasions, a direct positive is desirable, and such positives can be obtained on the bromide papers used for copying-work, by two different processes.

The first method is the well-known one whereby the developed, but unfixed, print is bleached out in an acid-permanganate bath, and the residual image of silver-bromide exposed to light. This, on development, gives a positive black-and-

white image. Good results are obtained by observing the following instructions.

The exposure must be sufficient so that development is complete in about two minutes, using the developer recommended for the particular paper used. After washing the print for five minutes it must be bleached by bathing for one minute in the following bleach bath:

Potassium permanganate	.....30	grains
Sulphuric acid (strong)	.....150	minims
Water	.....32	ounces

Rinse and immerse in a dilute solution of sodium-bisulphite to remove the brown stain, working in full daylight, and rinse and develop in the developer first used; then fix and wash in the usual way.

Any slight stain that remains in the print can be removed by bathing in a weak solution of potassium-cyanide, being careful to take the print out the moment the stain disappears, or the silver image itself may be attacked.

A second method, worked out in the research-laboratory of the Eastman Kodak Company, calls for developing in the usual manner, converting the unexposed silver-bromide into silver-sulphide and then removing the residual silver-image, leaving a positive image of silver-sulphide.

The exposure may be made in an ordinary plateholder, keeping the paper flat with a sheet of clear glass, and must be adjusted so that development is complete in two to three minutes in the following developer at 70 degrees F.:

Elon	8 grains
Hydroquinone	150 grains
Sodium sulphite	3 ounces, 100 grains
Sodium carbonate	3 ounces, 100 grains
Potassium bromide	50 grains
Water	32 ounces

This developer will keep well.

It is evident, in view of the fact that this developed silver-image is removed subsequently — leaving a clear white background — that all the exposed silver-bromide must be reduced to silver during development, or the highlights of the final positive will be stained or fogged. On the other hand, if the print is overexposed in the first place, spreading may take place and lines will be lost.

After development a rinse only is needed before the print is put into the darkening-bath, where it remains for two minutes at 70 degrees F., when the unexposed silver-bromide is converted into sulphide. The bath is made up of

Sodium sulphide (crystal)	1 ounce, 330 grains
Water	32 ounces

It will be safer to bring this solution to the boiling-point and allow to cool before using, in order to precipitate the iron present. The final color of the print, as well as the degree of contrast, will depend on the strength of this bath, which may be used almost indefinitely. A weaker

solution will give yellowish-green tones, but if the above strength of the solution is maintained, almost black lines are obtained. Rubber fingertips should be worn, to protect the finger-nails.

The print, after a few seconds' washing, should be placed in the following bleach bath until the highlights are perfectly clear, which will occur in about three or four minutes.

Potassium ferricyanide	11 ounces
Ammonium sulphocyanide	11 ounces
Water to	32 ounces

The temperature of the bleaching-bath is important. It may run from 65 to 75 degrees F., but it should not go beyond this, or the silver image may be attacked and the bath is liable to decompose. The bath ripens with age, and works best when it has turned a greenish color. Ammonium-sulphocyanide may be replaced by the potassium-salt without changing the action.

In view of the fact that ammonium-sulphocyanide dissolves silver-bromide, the print is fixed automatically during bleaching. After bleaching, the print should be washed well for five or ten minutes and dried as usual.

The finished print will have a slightly yellowish cast in the highlights, which can only be removed by continued use of the ferricyanide-bath, which is not desirable. Local yellow stains are due to the presence of silver-bromide along with the silver-image previous to sulphiding. It is important, therefore, to prevent this by correct exposure and full development. At all stages of the process the print must be agitated to prevent stains caused by uneven action of the baths.

In actual practice the process takes very much less time than it takes to describe it. Not more than twenty minutes are needed to carry it through, including the developing, sulphiding, bleaching and washing.

British Journal of Photography.



CAMP-SCENE

ROBERT A. WORSTALL



THE EARLY BIRD CATCHES THE WORM

RALPH OSBORNE

Nature-Faking With the Camera

RALPH OSBORNE

THE amateur photographer who has exhausted the subjects generally found about his home will hail with more or less enthusiasm a new field for his camera-activities. Although there is nothing surprisingly novel about the branch of photography I am about to describe, for it is neither more nor less than "table-top photography," yet it appears that all too few amateurs avail themselves of this interesting pastime. It consists simply in using for photographic models, stuffed and imitation animals and insects that may be picked up in the shops for a few cents.

At the outset, it must be said that these stuffed-animal studies are in the nature of a "fake." Yet it is just this very trick that the painter uses when he causes his lay-figures of men and beasts to assume natural poses and then paints them as actual, living creatures. Yet he is not censured for it, so why should not the amateur photographer be allowed a similar privilege?

The idea of this sort of photography came to me from a desire to do some still-life studies — something a little different from the eternal overturned basket of fruit, vegetables and the like. While passing an Easter display in a shop-

window, it occurred to me that these same chicks and goslings, with which the window was decorated, would make excellent models for my new venture. I therefore set about collecting a stock of what in the theatrical profession would be called "properties." My stock at present comprises a small family of chickens and ducks; a rubber snake that does not look too unreal; a spider whose legs are made of wire springs that joggle like fury at just the wrong time, thus making the photographing of him exceedingly difficult; and a grotesque dog that I discovered in a Japanese shop. Not a very varied assortment, it is true, but I have my eye constantly out for new objects, and hope before long to have a truly fearful and wonderful collection to draw from. By searching in the toy and novelty shops, any number of images will be brought to light that, either singly or in combination, will make highly interesting studies. Just here, however, let me offer a word of warning: Use only those figures that have a *dull* finish, otherwise the light will fall on the glazed surface and be reflected back in the photograph in such a way as to destroy the illusion.

This photographing of stuffed animals and the like has many points in its favor. In the first



TUG OF WAR
THE BONE OF CONTENTION
RALPH OSBORNE



CONSTERNATION OF THE EARLY BIRD

RALPH OSBORNE

place, it gives one's artistic skill a loose rein to go ahead and create something unusual and worth while. In the second place, it also gives one a chance to show one's skill as a photographer. One is not hampered by being hurried, or by the feeling that the model is getting tired — a fact which has been accountable for so many portraits being unsuccessful. The composition of one of these little scenes can occupy as long as one wishes. And last, but by no means least, among these advantages is the fact that it can be done anywhere or any time, out doors or in, in sunshine or artificial light. A very practical method is to set up the composition on a small table. When all is ready, table and all can easily be moved about before a window, and any number of novel lighting-effects may thus be obtained.

As to equipment, very little need be said. It is quite as possible to obtain artistic and natural effects with a pinhole in a cigar-box as it is with the most expensive camera obtainable. The ordinary folding pocket-camera with a portrait-attachment will give a very adequate negative — but one which will need considerable enlarging to get the best of results.

Although I do not plan that these pictures shall be actually funny, yet I try to have them gay in character. It seems to me that unless they are at least mildly diverting, they lose their *raison d'être*, for even with a tremendous stretch of imagination, they surely cannot be called beautiful. Their office is to divert, and if they succeed in this in a degree, they have accomplished their object.

&

WHEN one contemplates photographs of modern athletes in action, magnificent in physical proportions and convincing as artistic embodiments of vital energy — due chiefly to the agency of the perfected high-speed cameras — one wonders why man has arrogated such achievements to the human form. Why not similar representations of the horse, the dog — yes, the buffalo, the bear and the lion? Are they not just as perfect in their way as other forms of life, and is the photographer less able than the sculptor and the painter?

WILFRED A. FRENCH.

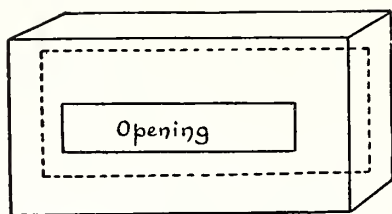


SELF-PORTRAIT
RALPH OSBORNE

Making a Skeleton Darkroom

T. R. CHURCH

AS it happens to be inconvenient for me to darken my work-room altogether when I have any photographic operations to perform, the idea occurred to me to construct a darkroom in one corner of it; and as, having done so, I have found it very satisfactory in every way, a brief description of the way in which it was constructed may perhaps be found useful.



A SIMPLE FORM OF VENTILATOR

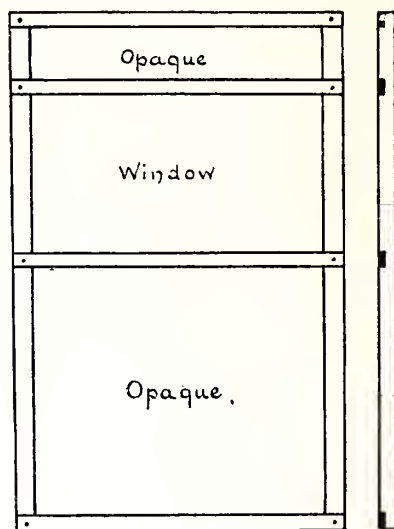
The basis of the "room" is a plain deal table, which I already had, the other materials used being a few strips of pine $1\frac{1}{2} \times 1\frac{1}{2}$ inches, some black glazed lining, brown paper and a few pieces of match-board. The first proceeding was to erect four posts at the four corners of the table, to surmount these by a wooden framework, to construct a similar wooden framework on the floor and to provide two long posts to connect the top and bottom frames, independently of the table. The sketch will show the disposition of the various posts, and it will be seen that in this manner, with a very minimum of carpentering and tools, I was provided with the skeleton of a dark chamber.

Only two sides of the room are shown in the sketch, and the top is omitted. The framework for the top and bottom is composed of thin battens let into the uprights so as to be flush with their surface. When these are screwed home, they add greatly to the rigidity of the structure, and they allow the outer covering to lie flat and smooth.

The skeleton was clothed with flesh by having neatly tacked over it the black lining, which was chosen for the purpose as one of the cheapest materials obtainable. The opening on the right-hand side of any one standing at the table was not so covered, for reasons to be pointed out in a moment, and there was nothing put over the floor. The top was covered except for the space

of about one foot, and an opening of the same width was left under the table near the floor. When the covering was done, some sheets of brown paper were pasted and left for a few minutes to get perfectly limp, and then carefully laid down all over the outside. A day or two later, the outside was papered over with wall-paper to match the room, applied in the same manner, so that when finished the whole had a neat appearance, and did not look an excrescence on the room.

The opening at the top, being left for ventilation-purposes, was surmounted by a cardboard light-trap. The inside of the trap was thoroughly blackened with dead-black paint before putting it together, and although the room is a very light one, it has proved itself to be perfectly safe. Another light-trapped ventilator was fixed under the table, as shown by the dotted line, and match-boarding was used for this, in order to prevent injury from accidental knocking with one's knees. These two traps provide a clear



THE PANEL CONTAINING THE WINDOW

airway, three feet by one foot — a liberal allowance of ventilation, which causes the air in the room to be perfectly fresh, however long I remain in it, in spite of its small size.

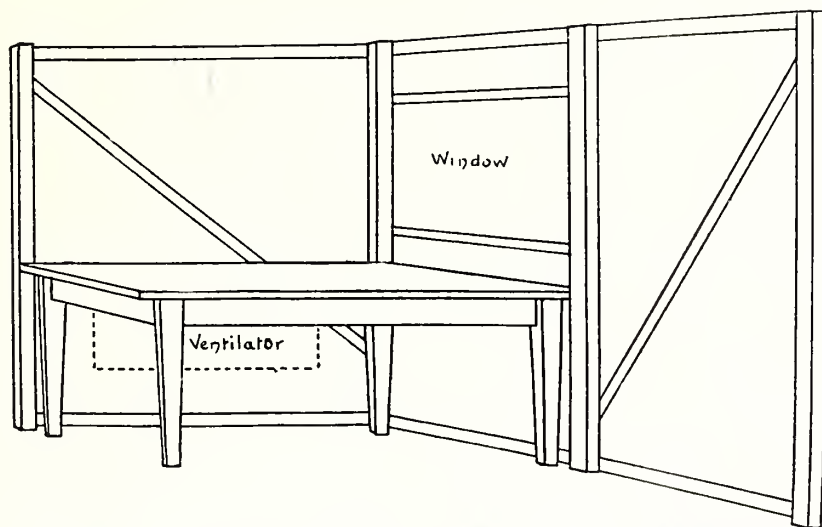
A sketch is given of a simple ventilator. It is a shallow box, enclosed on all sides except for

two openings opposite each other in the long sides. In the sketch, the opening is drawn much smaller than in reality. Down the middle of the box, and therefore between these two openings, runs a partition, wider than the openings, but not so wide as the box. The ventilator under the table is on the inside, but the one on the top is more conveniently fixed outside.

The opening left on the right of the table was intended for illumination-purposes, and was covered with two thicknesses of ruby fabric and one of canary fabric. Outside is a shelf on which a powerful table-lamp can stand; we have no gas

at the top coming down between them and making that secure, whereas the overlap in the middle is sufficient, with a little arrangement, to prevent any trace of light getting through.

The darkroom stands in one corner of the work-room, and in the daytime there is light enough inside for plate-changing, etc., without the need of the lamp; but for developing-work, I use the lamp. It would have been possible to dispense with any filling up of the two sides which go against the wall, if light-tight joints with the wall itself could have been made; but it seemed to me easier to fill them in, and this carried with it



GENERAL VIEW OF SKELETON DARKROOM WITH TWO SIDES OMITTED

or electric light, and this gives a beautifully diffused light all over, so that after one has been in the room for a minute or so, everything can be seen comfortably, and even small print can be read. A sketch of this panel shows the arrangement of the battens, which has already been referred to.

The doorway remains to be described. After some little cogitation, this was arranged by fitting on each side of a strip of board, brackets carrying a length of brass curtain-rod and some rings. On each of these was hung an old red curtain, lined, to make it as light-tight as possible, and the board was then screwed to the top of the opening. One curtain had its edge tacked to one doorpost, the other to the other. By drawing them back, the opening is left free, while when they are pulled across they make it quite light-tight, the board

the additional advantage that, if at any time I found it more convenient to have it in some other part of the room, it could be moved without any trouble. The whole structure is very light, and can easily be lifted when necessary for cleaning-purposes, etc.

I have kept no record as to the total cost of this arrangement; most of the materials I had by me. The principal item was the ruby and canary fabric, which, I believe, came to five or six shillings. The darkroom has been in frequent use now for two or three years, and has proved very serviceable. If I were making another, I should stiffen it by nailing diagonal stays across the various openings, as shown in the drawing, as it could then be moved about with less care; but apart from that, I do not think any alteration has suggested itself.—*Photography.*



FRED. SUTTER

“ And There Was Light! ”

THE earth entranced in dreams,
 The magic night abroad,
 Dusk upon the deep,
 And Love, the Spirit of God.
 And He spake in His might,
 “Let there be Light!”

In splendor then his hosts
 Released the fulgent rays
 That woke the sleeping earth
 To all her length of days —
 And woke the dreaming earth,
 And blessed the sparkling span
 Of seas, while angels choired,
 “Sweet peace, good will to man!”

Again, Jehovah, night
 Enshrouds Thine earth and sea.
 And hate and error war
 In bitter enmity;
 Great nations fight and bleed —
 The cause they cannot name;
 Thy once fair earth become
 A shambles red with shame!

Lord, send from Thy far heights
 Thy faith, Thy love benign,
 Thy wisdom and Thy grace,
 Thy peace, which is divine.
 Oh, speak, again, in Thy might;
 Lord, let there be Light!

INA L. COOK.

Men Whom a Woman Dreads To Photograph

GRACE COX RUTTER

THE woman who is a photographer has her particular troubles when some men come to the studio to be photographed. There are certain ones who are very difficult subjects and others who are not.

There is the business man who says that he has no time "for such foolishness," and fusses at every delay. His presence is due usually to the urgent persuasion of his wife; and often she accompanies him, having met him at his luncheon-hour. Any size or style of mounting suits him, and he drums impatiently on the sample-case while his wife selects the style. He casts fearful glances toward the operating-room, as if it were a dentist's-parlor. Sometimes he grumbles that his wife has one good picture of him, and why should she want another? She remarks that it was an excellent picture twenty years ago, but not as the children remember him. One might wonder why she wants to preserve the likeness of such a bear; but from knowledge of men in her own home, the writer has reason to believe that he is not always like this. Wife, it appears, has intruded sentiment into the hours sacred to business; wherefore, the lion roars.

In a large formal establishment she may be too awed to venture beyond the reception-room; but a modest studio, such as my sister and I have, is apt to be an easy-going affair, and Mrs. Business-Man frequently follows her lord and master under the skylight, and makes lots of trouble for all concerned.

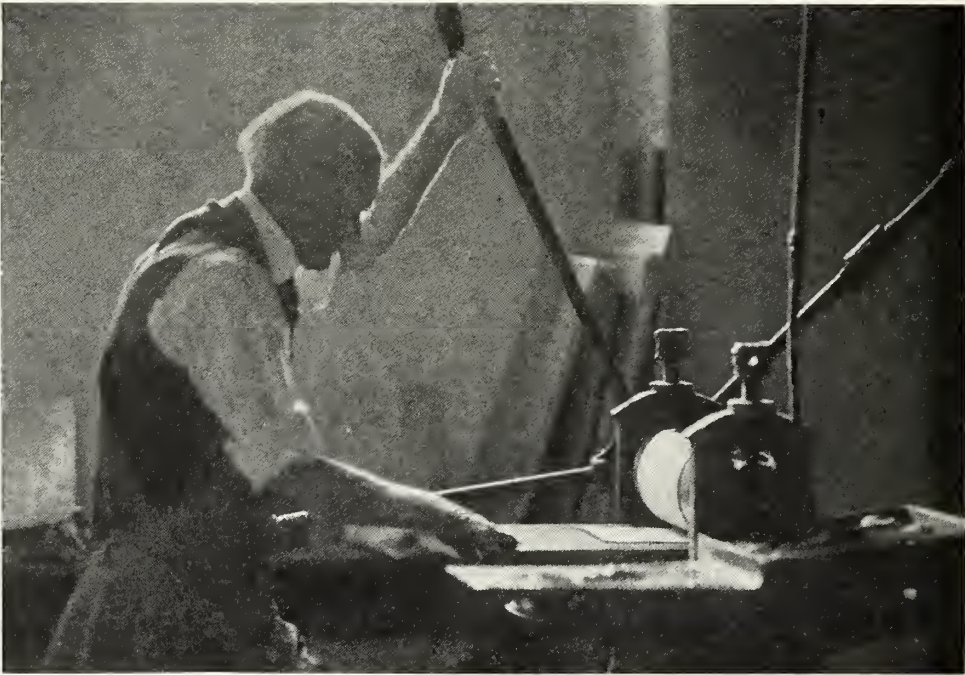
Of course she is eager to see that the exposure is made correctly and to advise his pose. She smooths the creases from his coat, regrets that he did not wear another tie, gives his hair a deft pat, and otherwise creates confusion and adds to the delay. I wheel a plain background into place to make a more suitable setting for a man's portrait than the ornate canvas just used for the previous sitter. Sometimes she asks foolish questions, observes she did not realize that he was so wrinkled or gray, is this the best light for him, etc., etc. Sometimes I suspect that she regards me suspiciously, as I observe his features closely and bid him turn more into the light that I may make the best picture possible — as though I did not have a man of my own, and far more attractive than her wrinkled spouse! I am forced to stifle an unrighteous desire to put a capable hand over her mouth and stop her chatter, for I must be polite in this business

though I am bored to distraction. At last, it is over; they take their departure; I unloose a tired sigh and scan the mirror expectantly for a new gray hair.

Still, with all his bearishness and his wife's nonsense, I think I prefer him to a certain other type whose kind I recognize as soon as he comes in. He may not be a woman-hater, but he casts doubtful eyes on every attractive woman and mentally labels them all as dangerous. There may be creases in his sleeve which I know no retouching can remedy satisfactorily, and his hair may resemble a mop; but at my lightest professional touch he suspects me of starting a flirtation. I do not like to have my motives mistaken, and such men make me nervous. I think conceit is largely to blame for his attitude; sometimes it is strangely mixed with timidity. In such cases, he is too bashful to look the camera in the face if I am behind it, and I have to step out of his range of vision and request him to look in the lens, while I risk an exposure without looking at him. All this for fear lest his knowledge of my gaze may give him an embarrassed expression. He is worse than any bashful country-girl. There are cases where he is as ugly as a fence or has a breath rivaling a garbage-pail on a hot day; but because he is a man he imagines every woman casts admiring eyes at him. Bah, you men! Give me the squalling babes every time to photograph in preference to you.

He is both laughable and pathetic; but there is another man who is neither. He *likes* to be patted and smoothed and arranged by the hands of a woman-operator. This would not be so objectionable; but he does not stop there. He calls you "girlie" or "chicken," and has been known to mistake politeness for frivolity, and to squeeze the operator's hand or chuck her under the chin. This is the limit which makes one woman-photographer not only angry, but red-mad; for I detest being chucked under the chin by an *alien* hand. (For the opposite effect, see one certain man, who is not an alien.)

Then, there is the poor fellow who is getting bald but hates to admit it. The sample print seldom suits him, and he objects to it because it makes him appear too old. You want to tell him to go to the mirror and look himself squarely in the face; but politeness restrains you, and you agree to another sitting, which is apt to be as unsatisfactory as the first. He cannot raise more hair in the meantime. Business with him is sure



ETCHING

KENNETH DOWS

to be disagreeable as long as he insists on a picture to look different from himself. In acute cases, he insists on wearing his hat, and in five years that portrait will look as out-of-date as grandfather's daguerreotype. Bald-headed men should wear a wig, or never have their pictures taken, or be honest with themselves.

And there is the fastidious dandy, who loves many duplicates of his pictured face, and comes with every item of toilet and dress in perfect accord. It is a pleasure to portray good tailoring, but when it is accompanied by a feminine nicety of manicuring and massage, perfume and powder — on a man — one suspects a vacant spot somewhere in the brain-region. He lingers long in the dressing-room and seems loath to tear himself away from his beloved image, curling his mustache and trying different effects of hair-dressing. As he drops languidly into the posing-chair, he gives his silk-clad ankles a jaunty swing and tugs at his perfectly pressed trousers' knees. What a nice looking girl he would be if gowned!

There is the very nervous man who is neither afraid of you not in a hurry — it is simply his natural every-day manner. He shoots out questions as to your terms and mountings, hurriedly fingers one sample after another, and often changes his mind after the exposure is made and

selects another style. He fidgets under the light, disagrees with your carefully worded suggestions as to pose; while he twists and turns, crosses one knee, then the other, and you wonder what dreadful burden he is carrying on his conscience. By the time you resign your mind to a poor composition, he drops into an easy position and you click the shutter, mentally deciding to remedy with the pencil what his expression lacked.

Truly, there are tricks in every trade, and making cross men look pleasant, dull men appear intelligent, and aging men look young are but a few of the photographer's tricks. Compared with women's and children's visits, men come to the studio seldom enough to be noticeable. I am glad of their absence when they belong to any of these types. But there are many ordinary, good-natured men, serious, yet pleasant men, who are easy to portray and who make satisfactory patrons. It is these ordinary fellows whom most women like best — those men who like to be chased to the door and told to wear their rubbers; when to put on flannels; whose first love is business, but who have the sense to give sentiment and pleasure a large place in life; who are always interested in the baby's newest trick or the dressmaker's latest product. Hurrah for the ordinary man!



YOSEMITE FALLS
HERBERT W. GLEASON



WINTER'S SMILE

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V. AKERS

Landscape-Photography

V. AKERS

TO tell of objects of art, and of the emotions produced by them through vision, as felt by those sensitive in such matters, is not an easy task. Vision is an indescribable experience at best, and to present facts of artistic vision or visual sensitiveness with words, should be attempted only by one skilled in the use and value of words and phrases. Much less should such a one attempt to tell others how such facts may be achieved by photography.

Because I experience such facts in everyday life in looking over my current art-magazines, photographic monthlies, drawings, paintings and sketches of my friends, and because I am told by critics in things artistic that my own photographs of native landscape possess something of pictorial merit, I am glad if I may contribute something which may by chance arouse enthusiasm and encourage others. Let me address this article to the younger enthusiasts and students of photography who have had neither extensive opportunities to study nor have possessed the best in the way of apparatus and equipment, but who love to see a beautiful print and who feel the meaning of a simple and delightful composi-

tion, though they may not know why or even dream of the idea the artist had when it was made. I would ask earnestly the attention of those who see nature often and understand her moods, and of those who feel it to be a part of their nature to reproduce emotions through artistic photography.

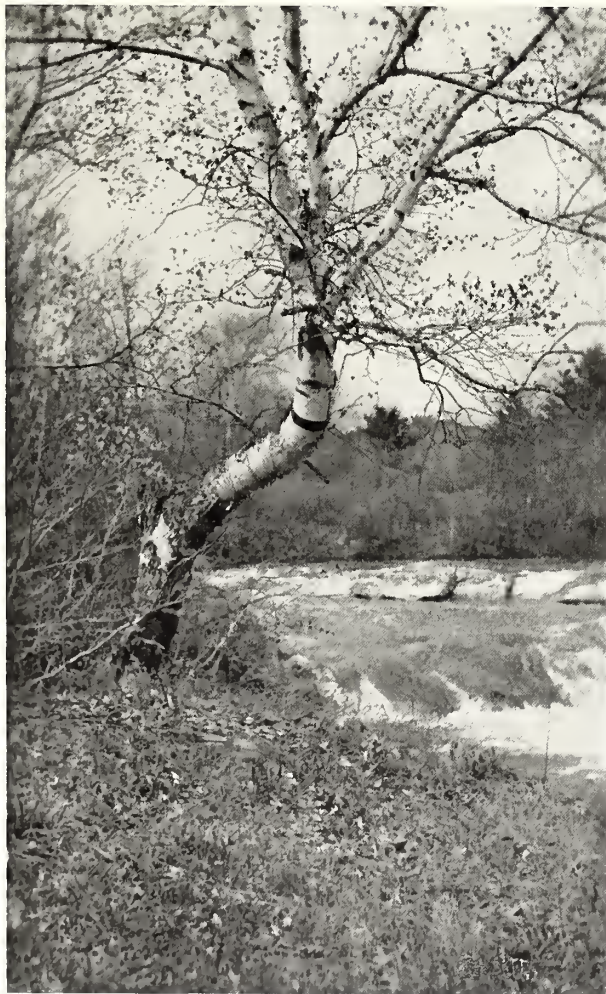
Interest is always attached to the equipment of the pictorial worker, and I am only too glad to admit the meagerness of my outfit, because it may encourage others who, like myself, cannot possess just the camera and lenses desired. Equipment is not so much a matter of materials in art as it is a matter of mind. I have seen very unusual landscape-work made with the smaller Brownie cameras. The secret is to find the exact moment when earth and sky express a sublime degree of significance and an exposure suited exactly to the existing conditions. These instances, I must admit, were chance ones, and the average of such work would be far too low for any one who was really interested in landscape-photography. But because I have always used a 3-A Folding Brownie for my camera, I would recommend it heartily as being well suited for work such as my own. It has made good.

The equipment, then, I would say, is, first, a mind searching continually for beauty; and, second, a knowledge of the medium of expression. What one would call a necessary equipment, another might call a big and cumbersome outfit. I can do no better than to explain my own method of working. I know well that others will find good grounds to criticize me for using such scanty equipment when so many excellent lenses and cameras are so easily available. When I start away for a day's trip, I prefer to "go light," as I do not wish to become tired and fagged by a heavy load. I want all my strength to cover ground and to keep a keen and sensitive eye fresh for everything I meet on the road.

My exposures vary a great deal. Experience has taught me that the use of different filters so changes the time that memory of previous conditions is a very uncertain guide; hence, to avoid too much chance, I record each exposure by making a rough table which governs a variety of conditions, and this I carry in my pocket for reference in case I do not remember what exposure K1 or K3 filter requires with different stops. This table is very general and is intended only for reference, as it is based upon the quality of negatives made previously and would be of little use to any one but myself. Perhaps my desire to make a large collection of cloud-studies has made it a practice with me to go out only when there is a beautiful sky. This, too, may be

the reason why I always use a color-filter of some kind to impart interest to my skies. It may be only the clear, transparent, cloudless blue at times; but to give this unbroken area interest, it must have gradation—character. To gain this to any degree, one must use a filter of the right kind.

The secret of beautiful landscape lies in the harmonious selection of such groups of trees and intimate features that will form an arrangement with the sky at your disposal. Often, one must travel many miles afoot to reach some remote group of trees which, by their character or position, suggest an idea or composition. I have crossed the frozen lake, time and time again, to get a rugged, pine-clad point against a certain cloud-mass; perhaps, to get there too late to have my picture include the cloud which had advanced far overhead; or, perhaps, to have the vapors condense before I reached the spot and take away, for the remainder of the afternoon, the



PUSSY-WILLOW TIME

Copyright, V. Akers
V. AKERS

sunlight which I wished to have included as light and shadows in the sculptured snow beneath the trees. My desire to have this interest, above the horizon, has made me unfit for work at my studio whenever the day begins with a sky full of clouds. I want to be off and away, and, unless my work is of a very urgent nature, I cannot resist. Fortunately for me, such days do not come too often, else I would need financial aid to obtain my bread and butter and to secure shelter.



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THE MEADOW-BROOK
THE SENTINEL BIRCHES
V. AKERS



You will ask, "Where can I find subjects of sufficient interest for me to stop and photograph them?" That must be answered by the individual according to the ideas he may possess and which he has gained from his visual experience in having received artistic beauty and harmony through the works of others, or in his direct sensitiveness to nature. My own environment is lacking conspicuously in natural features which would invite the painter as a sketching-ground. It boasts of no mountains, streams, picturesque old buildings or old and stately trees; yet it has a very likable variety of commonplace New England features, such as a lake, a meadow-brook and some rolling upland-pasture lands. My pictures, if pictures they be, may be duplicated and improved upon by any one who will search for beauty beyond the walls of the city. They are what I find near at hand and within walking-distance.

I would say, however, that to escape the commonplace one must first see his picture in his mind's-eye before he makes his exposures, otherwise he will be wasting good material for nothing. Every time I study the little finder on my 3A for the exposure I am about to make, I see it as a painting in full color, glowing with all the beauty of a masterpiece in a museum of art. I imagine it a work of importance, and search eagerly for the balance of masses, rhythm of lines, concentration of light, unity and simplicity of subject and, above all, the avoidance of

squares in the corners. Perhaps, having soft-focus eyes has given me an ability to see masses without the confusion of their detail. I know I am much blessed with this slight near-sightedness, for it enables me to see as the painter does by half closing his eyes to establish the big

masses and values before him. For, after all, a photograph can have no emotional appeal when it is filled with confusing detail. Those having less of the painter in them will see other and different things; but without some big guiding desire, a beautiful print will be only accidental.

With a pocket full of exposed films, and about to enter the dark-room on my return home, I experience an indescribable sensation. Usually, there are some good pictures; occasionally none at all worth the time and money spent for materials; and, again, when you view your film after it has fixed to transparency, you will see in your very hands the composition you were after. It is then — if you are

like me — that you will have a feeling of joy which is akin to the joy you will have when you find the pot of gold at the foot of the rainbow.

Prints on different papers follow the drying of the films, and, nearly always, I find the softest paper to be the one that gives me the closest resemblance to the original scene. Prints on buff papers seem to suggest color to a considerable degree; but you will soon learn that, unless the negative has a very long range of values and is fairly strong, it will be better judgment to use



THE EDGE OF THE WORLD

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WINDSWEEP
THE DAY'S FAREWELL
V. AKERS



white stocks. Then follow enlargements on the bromide papers with the soft-focus lens, varying the diffusion as seems best to produce the quality which best expresses the idea I had at the beginning. Let me say here that in the enlarging of your prints you will have more opportunity to study the real value of your negative than at any other stage of the work. Of course, the whole joy cannot be realized unless you have had in mind a final statement in gum. Enlarged negatives follow, and you have finally a print framed, and hang it on a neutral-gray wall, where it silently tells others of beauty seen and patience exercised to bring that very beauty to their attention. No; I will not say "to their attention," for you, yourself, have gained far more than the other fellow.

As to methods of making prints and enlargements, follow what you consider to be the most

beautiful example of photographic workmanship you have ever seen. Aim to duplicate it in perfection and surpass it if you can; but be sure that it does express what has appealed to you as the highest art of all your visual experience. There is a living painter whose work I seem to enjoy better than that of any other, and I always have in mind the few of his pictures that I have been privileged to see; but I am ever telling myself that it would never do to copy his compositions or to try to produce photographs which would bear a resemblance to his work. I must find my own. What he has done for me by way of pointing out the beauty of the commonplace is his contribution to the general store of visual experience which I have had, and I must take him as an example and contribute something from my own ideas and my own locality. This is the spirit that produces an inexhaustible supply of incentive.

The Photographic Pun

EDWIN B. WHITING



PHOTOGRAPHIC puns are difficult to invent, and therein lies their charm. The making of a photographic pun forces us to think, and then to plan a feasible execution of the thought.

The results may vary all the way from art to such an attempt at burlesque as a picture of a string of sausage entitled, "Ground-hog," "Wood-chuck," or even "Faithful Fido Finally Finely Finished."

"Stale, horribly stale!" you exclaim.

We admit the accusation, but it is not easy to start right out into the cold, cold world and bring home a dozen perfectly good fresh sparkling photo-puns in one short day. Try it and be convinced. Your think-tank will collapse long before your developing-tank gets full, unless you belong to that unhappy class of beings known as geniuses.

A close-up photograph of the sole of a boot or shoe studded with hobnails might properly grace the title, "Study," "Studied Effect," whereas elastic minds might see the point in the title, "My Hobby." I draw the line at "My Hubby."

The picture of a polcat is quite a different matter from the "critter" itself, particularly when the cat is a plain cat rejoicing in the name Milly Matisse Petit-Chat, and indulging in her atavistic tendency to climb trees by scrambling up a ten-foot pole to pose gracefully at the top

for the photographic punster. Any cat up a pole is a polcat for the moment, and there you are.

The nearer you get to a beehive or wasp's nest, the less funny it looks; but if you use your longest focus on a cool morning, there is nothing but fear to prevent you from acquiring a pictorial, architectural photograph entitled, "Bughouse." If any of the English journals take it into their heads to quote this euphonious title as a sample of American humor, it is hoped that they will not misquote it as "Insect-Dwelling."

Comedy and tragedy run a close race. The thoroughly Prussianized worker bees have lost their individual initiative. If you care to imagine yourself to be a bee, you can better appreciate the tragedy lurking in the application to their dwelling, of the word "Bughouse," taken from the democratic underworld of despised individualists called tramps. Our slangy *outré* title has led us from the comic to the philosophical. A photographic pun has forced us to do that most difficult of all things on this mundane globule — really to think.

The writer has not yet had stolen his perfectly good second-hand auto, a sort of antediluvian monster with four wheezy lungs. Before many more happy fleeting years have passed, this will make an exquisite genre-subject to go over the title "The Junk-Wagon," or just plain "Junk" — with apologies to the Chinese.

There comes a time in the career of every ama-



THE "POLECAT"

EDWIN B. WHITING

teur photographer when he or she is at a loss for a subject for a picture. Photographic punning offers a serious solution of the difficulty. It is equivalent to a vacation in real life. Moreover, it is a social institution. Photographic clubs, or any social gathering largely composed of camera-owners, may collectively think up photo-puns, with the agreement that at their next meeting each member shall bring in a photograph expressing his own particular version of the pun. The interpretation of the thought processes involved in the production of such a collection of pictures would give a psychologist a rousing headache; but they would be highly interesting to the layman, and they might, by sheer audacity of conception, raise a smile in the most cynical connoisseur of art. It would be worth trying.

With all due respect to the manipulators of Wall Street and to "the man with the hoc," we might go a step farther and suggest that our mental sword become two-edged. For example, the words "Crowbar" and "Black Sheep" would fit as titles for two such radically different pictures as one showing a dark-complexioned sheep, or one showing a long and pointed bar of steel nonchalantly leaning against a barn-door. Both titles would do for both pictures. Out of the mental haze involved would spring, hydra-headed, a pair of lusty photo-puns.

✂

TRUE art endures forever, and the true artist will be beyond the reach of the world's misery.

BEETHOVEN.



BEACH-PHOTOGRAPHY

FOSTER LARDNER

Beach-Photography at Block Island

FOSTER LARDNER

PY way of proving that you're a regular water-dog, there's nothing more convincing than a photograph of yourself "in the swim," and how they — the public — do go to it. I have counted twenty-one professional photographers on a beach not over two hundred yards long, and all doing a thriving business among hundreds of amateur camerists. On talking with several of these men, I found that most of them worked the Florida beaches in the winter, coming regularly to Block Island, R. I., in the summer. On the Block Island beach they seem to flourish to a greater extent than on any other beach I have ever visited. With anything like the proportion of bathers, they are always on hand during bathing-hours to furnish the evidence as to where you got the sunburn. A good deal of the picture-making is done on the sand, to be sure; but the obliging and most energetic photographer is usually ready to make it more realistic by going into the water with his "sitters" or "standers," and snapping them as they meet the embraces of an incoming wave. For this purpose he wears a bathing-suit, and carries his extra plates in a bag swung over his shoulder.

Competition in the business sometimes drives

the photographer to take long chances, and he will make a picture "on spec" at any time. Anybody who will consent to "look pleasant" can have a plate made. By the next noon, or within a few hours, if desired, the proof is ready for inspection, and the artist is ready to take orders.

The accompanying illustration shows one of the Block Island photographers snapping a group of bathers who have decided to pose.

This style of group is very popular, and, of course, he always stops in front of Mr. and Mrs. Newly Wed and their baby, and tells them what a handsome child they have and what a fine picture all three would make, and he seldom fails to do business then and there.

Another favorite pose is the "sand-dune pose." There are great piles of sand back from the beach which rise almost perpendicularly to a height of fifteen feet or more, and the enterprising photographer will get several bathers to sit one behind and above the other till he collects fifteen or twenty people — the more the better, for the more there are in the ladder the more pictures he will sell. There they sit, more or less patiently, with their heels digging into the sand "toboggan-fashion," till he can find no more victims, and at last proceeds to "take them."



SKYLINE OF NEW YORK

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EDITORIAL



Professionals Should Specialize

THE following joke met the eye of the Editor: "Pa, what is a specialist?" "A man who has discovered which of his talents will bring him the most money, my son." There is more to this brief dialog than its humor implies. Its application to the professions is obvious. There is no doubt that for one person to practise several activities of an avocation, such as art, music or photography, relieves it of monotony and imparts to it an element of pleasurable diversion. An artist may take delight in painting portraits, animals, flowers, marines; but if he is really serious in his desire to excel, and, above all, to make a living, he must decide in favor of one of these attractive subjects, concentrate all his ability and enthusiasm upon it and acquire a reputation as a specialist. To be sure, he can indulge an occasional impulse to depart from his chosen occupation without detriment, and probably with benefit, to his creative talent. It will afford him the necessary diversion and, on the other hand, tend to stimulate his dominating activity. Very frequently we hear of an artist who paints widely different subjects with equal skill, or of a musician who can perform on two different instruments with equal proficiency, but is active professionally in but one. This would seem to disprove the general impression that the more versatile an artist, the greater his earning-capacity; yet it seems certain that concentration of one's efforts tends towards superiority in performance and towards pecuniary success.

Apropos of persons possessed of diversified ability, one is reminded of many notable exceptions: Michelangelo — equally famous as painter, sculptor and architect; Cellini — engraver, sculptor and goldsmith; Franklin — editor, philosopher and statesman; Count Rumford — natural philosopher, economist and statesman; Wagner — musician, poet and writer. One of the most brilliant of modern exemplars of this theory — an American, too — was F. Hopkinson Smith, a distinguished painter, engineer, architect, writer and lecturer. Obviously, such examples of versatile genius are rare, and, perhaps, to be admired rather than emulated. As has been already implied, an accomplishment that is not connected directly with the dominating activity may prove to be a positive aid in its development, or it may

tend to weaken it, as the case may be. The world is filled with persons who unite in themselves a number of accomplishments, but who are eminent in none. To an individual favored with an independent income, such a plethora of gifts may be a source of satisfaction; but to one who is obliged to earn his living, it spells disaster. A case in point — and here the subject may be of practical interest to our readers — is the professional photographer. We often see him equally proficient in studio-portraiture, outdoor-groups, commercial work of all kinds — including photo-finishing for the camera-user, color-photography, restoring daguerreotypes and preparing lantern-slides. Were it not better if he selected one of these activities that appeals to him as the most congenial and profitable, devoted to it his best energies and made it his exclusive specialty? Is such an effort not worth while? It may be a serious matter with him, and if he remains indifferent to the suggestion, it may be because he is content to remain a member of the great army of mediocrities — a jack at all trades and master of none. The other alternative — provided the versatile but unsuccessful photographer has the requisite energy, skill and personality — is to unite his several activities under one large establishment, assign each department to a competent assistant, personally superintend the whole, maintain a high-minded policy and — enjoy prosperity. Highly successful enterprises of this character are conducted in New York, Philadelphia, Pittsburgh and Chicago, and there seems to be room for more.

The decision to concentrate one's abilities into one distinct and profitable activity, without any side-lines, was reached several years ago by one of the most distinguished portrait-photographers in this country. Although he was conducting a successful portrait-studio in a great city, he divided his energies between studio-sittings, home-portraiture, autochromes and restoring daguerreotypes. Although uniformly skilled in these somewhat conflicting kinds of work, and busy from morning till night, his bank-deposits did not indicate financial prosperity. The trouble was that when busy with home-portraits, he lost chances to make studio-sittings which had a far greater money-value; also that the time he gave to other work was needed to promote the business. He therefore confined himself to his chief source of profit — studio-portraiture.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

Quarterly Miscellaneous Competitions

THESE will continue to be featured in PHOTO-ERA competitions during 1917 and 1918, so as to afford more opportunities to our readers to win official recognition.

Awards — Spirit of Spring Competition

Closed June 30, 1917

First Prize: W. C. D. Martin.

Second Prize: J. T. Dimpleby.

Third Prize: Richard Pertuch.

Honorable Mention: Harriet J. Goodnow, Bertran F. Hawley, Mollie G. Hitchcock, Franklin I. Jordan, Irving S. Lovegrove, E. M. Pratt, H. B. Rudolph, J. Herbert Saunders, Bradford G. Warner, A. S. Workman.

Subjects for Competition — 1917

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Domestic Pets." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Still-Life." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher of PHOTO-ERA.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.

FIRST PRIZE
SPIRIT OF SPRING



SPRING-TIME

W. C. D. MARTIN

Vacation-Pictures — Advanced Competition
Closes October 31, 1917

NEARLY every camerist has his own ideas about making vacation-pictures. It is this fact that should make this competition one of the most interesting of the entire year, because it will have a tendency to portray vividly the activities which are known as hard work to some and as relaxation to others. Though the usual pictures of recreation during vacation-time will be acceptable if they are exceptionally good, competitors should try for the unusual vacation-picture which possesses originality of subject and treatment.

The accepted forms of vacation-pictures consist of all manner of snapshots depicting swimming, boating, riding, golfing, camping, picnic-parties, outdoor portraits and groups. Here and there, an attempt is made to photograph an attractive landscape; but, as a rule, more pictures are made of persons than of scenery. Of course, there are exceptions; but my remark is based on an intimate acquaintance with vacation-pictures in the darkroom and talking with camerists when engaged

in the photo-supply business, several years ago. The superabundance of the human element in most vacation-pictures is due to the fact that vacations are spent usually with one's family or with friends. It is natural to desire to record events as they are shared by all. Again, the happiest hours of vacation-time are those one spends with others, or with *one* other. It must be admitted that the preponderance of persons in most vacation-pictures is true to the life, and that the presence of our family and friends — if properly handled — may lead the camerist to portray an incident that is original and of permanent interest.

There are interesting possibilities in attempts to show what different persons consider a vacation to be. There are some who enjoy their vacation in a hammock and the time to read; some who study the birds; some who enjoy viewing an expanse of sea or a panorama of mountains, and others who prefer to sit all day on a veranda. At first glance these, or similar vacation-activities, do not appear very alluring pictorially; but remember that often unbounded opportunities lie at hand in the commonplace. A girl in a hammock may

or may not suggest a pictorial masterpiece; but with certain girls, and under certain conditions of light and background, such a subject, properly treated, might be made a joy forever. An elderly lady or gentleman seated on a promontory could be made allegorical as depicting the sunset of life, with the weary traveler looking back over the long road. A group of ladies seated on the veranda over a cup of tea has possibilities according to the temper of the camerist to portray simple sociability or the busy tongues of gossips. These last suggestions are not strictly vacation-pictures, but they point out the fact that during vacation-time it is possible to make pictures that would make excellent genres not obtainable in any other way.

A true vacation-picture should illustrate some activity associated with the accepted understanding of the meaning of vacation. If, in addition to this, it is possible to present a given subject from a fresh point of view the camerist is on the right road to a comprehension of this competition and its purpose. As already pointed out, it is not necessary that vacation-pictures always show action. In short, the picture that conveys to the beholder a striking, clear-cut example of the spirit of vacation-days — in whatever form it may be present — should be entered in this competition. Because a man is shown playing golf does not imply necessarily that he is on his vacation and that he is enjoying himself — his physician may have prescribed golf to cure dyspepsia. On the other hand, if the same man is suitably attired and is bending his body gracefully behind a drive — the power of which is apparent — such a picture reflects the vacation-spirit to better advantage because it carries conviction and is true to the life. This fact may be applied to all vacation-activities in which the human element is the center of interest. Endeavor to convince the beholder that your subject is carefree, and that his heart and soul are in the sport, whatever it may be. A man in a bathing-suit is far from prepossessing; but the same man leading a swimming-race, executing a graceful dive or frolicking in the surf with his children vitalizes an otherwise hackneyed subject.

Those camerists who wish to make pictures of a camping, automobile or fishing trip should give a fair amount of attention to subjects not including the members of the party. An interesting photographic record of such a trip should show well-selected pictures of places of interest *en route*. These, combined with scenes of a personal nature, will constitute a complete and satisfactory record out of which one or more pictures could be selected for this competition. Several excellent examples of interesting narrative and attractive vacation-pictures appeared in PHOTO-ERA during the year. Two in particular should be mentioned as of value to competitors: "A Camera-Trip to the Blue Ridge Mountains," by S. A. Weakley, in February, 1917; and "The Camera in Camp," by Charles M. Mansfield, in June, 1917. Make each vacation-picture tell its story clearly, interestingly and completely. Do not lean on an appropriate title to carry it through; have the picture judged for itself alone.

At the risk of repetition, let me assure competitors that the jury is more concerned with the picture than with the type of camera or lens used. The pictorial efforts of a Brownie camera-user are as welcome as those made by the owner of a *de luxe* equipment. In connection with this point, turn to the beautiful pictures which illustrate the article, "Landscape-Photography," by V. Akers, in this issue — they were made with a 3A Brownie! Disregarding all arguments, pro and con, the fact remains that it is the camerist himself, not the photo-equipment, who must assume the respon-

sibility of failure or of success. Remember this fact!

Despite the warm weather and the busy vacation-days, those who enter this competition — and every competition — should remember that each picture entered must represent the competitor's photographic executive ability from the snap of the shutter to the finished print. The temptation is ever at hand to let the photo-finisher "do the rest," particularly during warm weather. However, we know that not a few camerists obtain fully as much pleasure from the technical work of photography as they do from operating the shutter and lens. Those who "see it through," photographically, take more interest and consequently produce better pictures. The fact that the other competitors know that a picture is the result of personal work makes them more interested and more appreciative. Thus, all concerned begin and end on the common ground of mutual understanding and absolute fairness.

Though vacation-pictures have no limit with regard to possibilities, it is hoped that competitors will not overlook the children, who enjoy their vacation as thoroughly as the grown-ups. Particularly would children's pictures portray true vacation-time if they included father or big brother also on his vacation and enjoying himself with the children. However, any groups of this nature should be unstudied and, if possible, should be made when the subjects were unconscious of the camerist's presence. The point is specially important with regard to the children, whose actions cannot be controlled always with success. Interest attaches itself to groups which include mother or sister. These must be handled carefully, so that the vacation-spirit is not lost sight of in a too lively interest in the children. However, should an exceptional opportunity present itself, make the picture without delay, as it may find a place in later competitions.

It is hoped that the 1917 Vacation-Picture Competition will produce some original, beautiful and interesting pictures that will delight competitors and readers because of their excellence. If the pictures portray that which is the lot of many to experience, they will touch a common chord of pleasure, appreciation and reminiscence. Perhaps in no competition may the little unconventional glimpses of family-life and friends be shown with greater appropriateness. As Shakespeare so truly says, "One touch of nature makes the whole world kin."

A. H. BEARDSLEY.

Transmission of Pictures Across Great Distances

"Now we are ready to explain what selenium will be able to do in a practical way for mankind," says J. S. Newman, in a recent and interesting issue of *St. Nicholas*.

"Already we are able to send the human voice thousands of miles by means of electricity. We can reproduce handwriting great distances away by means of an ingenious electrical instrument called the telautograph. Selenium enables us to transmit photographs over wires, just as sound and writing are transmitted. The instrument used for this purpose is called the telephotograph by its inventor, Professor Korn, a German scientist. Professor Korn's apparatus is not new. It has been known to us for many years. However, recent improvements have brought it more seriously before the public.

"No attempt will be made here to give a detailed description of the device. In brief, however, a pinhole beam of light is made to travel over a photograph in



FLOWERS ON LIFE'S PATHWAY

J. T. DIMBLEBY

the same manner as a phonograph-needle moves across the record. The reflection of this beam of light is made to fall on a selenium-cell, which is simply a series of tiny metal-plates separated by very thin layers of selenium. The intensity of this reflected light will vary according to whether it travels over a light spot or a dark spot on the photograph. The selenium is affected by this varying light and allows a certain amount of electric current to pass through it for each variation of light. This constantly changing current may be sent many miles through wires, and by means of ingenious instruments may be made to reproduce the photograph with great exactness.

"Already certain European newspapers have installed telephotographs, and are able to reproduce pictures and photographs taken hundreds of miles away a few moments after they are taken. The identification of criminals can be made to precede them in every town and village to which they may be likely to flee.

"Countless uses will be made of this wonderful device. We shall all live to see the time when American newspapers will be able to print photographs taken on the very day of their publication in far-off Europe and Africa.

"But a greater and more amazing thing has been

predicted. Some day, by means of a combination of the telephotograph and the motion picture, we may be able to sit in auditoriums and actually watch events taking place at the identical moment in places miles away. Californians will be able to witness a Presidential inauguration in Washington, a boat-race on the Hudson or a battle between warring nations at the very moment these things are taking place. It is far from impossible; it is probable.

"And all because nature provided us thousands of years ago with that evil-smelling brown powder—selenium."

A Cause of Bad Tones With the Hypo-Alum Process

No matter how excellent a photographic process may be, there are always some workers who have more or less difficulty until they master the details. With this fact in mind, R. M. F., in the *Amateur Photographer*, gives some valuable suggestions with regard to the hypo-alum process. "We hear frequently of bad tones upon bromide-prints toned with the hot hypo-alum bath, and also of trouble from uneven action, and this may be frequently attributed to the use of too hot



"WHEN THE HEART IS YOUNG"

RICHARD PERTUCH

THIRD PRIZE — SPIRIT OF SPRING

a bath at starting. The writer has found that if the prints are placed in the cold solution, and the latter gradually heated to 100 degrees Fahrenheit, no trouble need be anticipated from this cause. The reason why prints often bear patches of color that refuse to tone, or are of a color not uniform with the rest, may be traced to the fact that the print has been allowed to lie — film down, most likely — at the bottom of the dish or vessel, and the heat from the flame underneath has 'cooked' the emulsion. It is a good plan, if troubles of this kind arise, to place the toning-dish inside a larger vessel containing water, resting the former upon some support to prevent the actual heat from coming too close to the prints themselves. If this plan is adopted toning will be the more uniform and even in its action. A new hypo-alum bath will be found to have a bleaching-action, and for this reason it is a good plan to keep all wasted bromide-prints, and tone them in any new bath that is made up, in order to get the latter into a more reliable condition. An old bath should never be thrown away, but any loss that is consequent upon evaporation may be made up without any fear of the reduction of subsequent prints to be toned by the gradual addition of fresh solution. If a little be added each time after the bath has been used, trouble from this cause need not be anticipated."

Two New Useful Books

The attention of the student in pictorial photography is invited to two new valuable books for his library — "Through the Year With Thoreau," edited and illustrated by Herbert W. Gleason, the eminent photographer and lecturer, and "Japanese Flower-Arrange-

ment," by Mary Averill, demonstrating the fundamental principles of flower-composition. These books have been reviewed carefully by the Editor — see this issue — and copies may be procured through PHOTO-ERA. Attention to the rudiments of pictorial art by the intelligent worker will result in greatly improved technique and increased pleasure, efficiency and profit.

A Glue for Celluloid

A VALUABLE formula to know is given by P. E. O., in the *Amateur Photographer*. "Workers who believe in using all and every photographic scrap frequently need a glue to mend together broken celluloid-articles. A very good formula, and one well tried, is the following:

Shellac	2 parts
Spirits of camphor	3 parts
Strong alcohol	4 parts

Dissolve the shellac, etc., in a warm place, and keep well corked. Besides gluing celluloid, it fixes wood and most metals to it."

Free Trial-Subscriptions

PARTICIPANTS in either PHOTO-ERA monthly competition, who receive Honorable Mention, may have the privilege to give to a friend — not a reader of the magazine — a free trial-subscription of three months. This plan is also to be retroactive and to include entrants in competitions beginning with March, 1917.

If those who are interested in this proposition will promptly notify the Publisher, their wishes shall be complied with immediately.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS
With Reviews of Foreign Magazines, Progress and Investigation
 Edited by A. H. BEARDSLEY



Douglas Natural-Color Motion-Pictures

ACCORDING to reports, Leon F. Douglas—the millionaire-inventor of San Rafael, Cal.—has perfected a new method to produce natural-color motion-pictures. At a practical and successful demonstration, which was attended by artists and many well-known persons, it was shown that the invention could reproduce landscapes, marines, flowers, interiors and people true to the life and in motion. It is claimed that these natural-color pictures may be made with any motion-picture camera by the addition of a simple attachment to the lens. It is our opinion that this attachment is a device similar to the revolving shutter, with color-sectors as used in the projection of Kinemacolor motion-pictures. According to Mr. Douglas, the negative-reel is made first and then the positive, as at present; but in the new method the positive film is treated subsequently by a special chemical process which brings out the imprisoned color. This color-treatment costs about half a cent a foot. All previous methods have consisted of the laborious addition of color to the film. Mr. Douglas claims that with his method the color is conveyed directly to the sensitive film from nature itself, and that it becomes part of the film by his process of development. Whether this new invention will prove to be all that is claimed for it, commercially, remains to be seen. In any event, it portends the day when natural-color motion-pictures will become a practical commercial success and an added source of enjoyment to thousands.

How To Keep Air from Solutions

MANY excellent chemical solutions used in photography are subject to rapid oxidation unless protected carefully from the air. Although photography has made remarkable strides in efficiency and simplicity, there still remain several useful and ingenious practices employed by photographers of thirty-five years ago. Among these is one to prevent air from reaching developing or other solutions, called a "developing-bottle." This apparatus—devised originally to preserve solutions of ferrous oxalate—consists of a wide-mouth bottle with a cork-stopper pierced by two glass-tubes. One tube is bent in the form of a spout, to pour the solution into a tray. The other one is a thistle-mouthed funnel through which the solution may be poured back into the bottle. About half an inch of oil is poured on top of the solution to seal it effectually from the air. To use the "developing-bottle" the operator blows into the thistle-mouthed funnel and the air-pressure expels the solution through the delivery-tube or spout.

A Good Photographic Mountant

It is always well to know of an absolutely safe and reliable mountant. P. E. O., in the *Amateur Photographer*, gives the formula for one which he claims to be excellent. "Experienced photographers are usually very cautious as to what mountant they use for prints. They learn generally by experience the various evils attendant on the use of certain mountants. Perhaps the worst sin is to have chemical reaction going on in the constituents of the paste. This naturally injures the

print. Another is either the excessive dryness or moistness of the mountant. The following gives a paste quite free from these defects:

Water	2 pints
Gum-dragon, powdered	1 ounce
Gum-arabic, <i>genuine</i>	4 ounces
Glycerine	4 ounces

Mix the gum-arabic with about half of the water, and in the remainder of the water dissolve the gum-dragon. When both the two solids have dissolved, mix together and stir in the glycerine. This is quite free of chemical action, as it has no acid or alkaline constituents. It is perfect in being just moist enough. The water-absorbing tendency of the glycerine being balanced by the reverse nature of the gum-arabic, it is likely to get neither too dry nor too moist."

The Appearance of the Negative

It is often of great assistance to be able to judge a negative with regard to over- or under-exposure by inspection. A paragraph in *Photography* is of interest in this connection.

"Any one who sees a good many negatives is sure to notice that most of them, if they are not fogged, can be seen as positives by reflected light, if a little trouble is taken to hold them in a suitable position. But it is likely that the fact may be overlooked that this appearance gives a clue to the exposure. If the negative has been fully or overexposed, then it is most unlikely that a positive picture can be seen at any angle by looking at the gelatine-coated side; but that by looking at the glass side this will be noticeable. With plates that have been much overexposed, it is often very plain indeed. On the other hand, underexposed negatives can generally be best seen as positives by looking at the film and not the glass side; in fact, if a positive is clearly seen on this side we may be sure that the negative did not have enough exposure. Fog of any kind will mask these indications, and even without it they cannot be seen with some plates and some developers. But whenever a positive image can be seen at all, it will be found that the rule which connects the exposure with the side from which it is best seen holds good."

[Unmounting Dry-Mounted Prints

A good correspondent in *Camera Craft* writes as follows: "A customer brought in a number of amateur-prints, some of them mounted and some not, and wanted them all placed in an album in a given order indicated by numbers on their backs. When we came to separate the mounted ones from their mounts the fun started; they had been fixed down with mounting-tissue. Soaking did no good, they would n't peel off worth a cent, and what could we do? The same afternoon a demonstrator came in, and learning of our difficulty at once showed us how to do it. Taking one of the mounted prints, he moved it around about a foot above the lighted gas-burner that we use for making paste, holding it face up and horizontal. In less than a minute the print started to curl away from the mount, and was soon entirely free, without any damage to either itself or the mount." This is an excellent method to know.



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$5.00.

Second Prize: Value \$2.50.

Third Prize: Value \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. ***Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

6. ***Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.***

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-pencils. Large packages may be sent by express very cheaply and with indemnity against loss.

Awards — Beginners' Competition

Closed June 30, 1917

First Prize: Martha Curry.

Second Prize: Lena M. Tewkesbury.

Third Prize: Dr. B. Frank Gray.

Honorable Mention: N. L. Avery, Halvor A. Caum, E. W. Congdon, John A. Elkins, G. W. French, Paul F. Hodge, Robert R. Luce, Louis R. Murray, C. A. Pierce, Geo. P. Russell, A. S. Workman.

Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

Selecting a Picture-Frame

MOST persons who build their own homes fail to give sufficient attention to appropriate picture-frames. The right kind of mats and frames is an important factor to make halls and rooms attractive. In selecting both for a picture, its nature and character should be considered carefully. Dark walls are not the place for white frames and mats, as the latter would attract more attention than the picture itself. The frames should match the walls as nearly as possible. A picture with a mat and a frame too large, or of too poor a quality, or of wrong colors, shows little consistency and artistic choice. Wrong color will destroy the subtle tone of a painting. A picture should never have a setting which detracts from its study.



"THE SPIRIT OF '17"

MARTHA CURRY

FIRST PRIZE — BEGINNERS' CONTEST

Shutters

THE improvement in the construction of various types of shutters has kept pace with the development of cameras and lenses. To-day it is possible to photograph subjects moving at tremendous rates of speed. Even a shell leaving a cannon's mouth may now be recorded. Despite the great advance made in the manufacture of shutters, the fact remains that the camerist must be careful with regard to the position in which he uses his shutter.

Most between-the-lens shutters work satisfactorily when they are turned on their sides or inverted; but others show a variation in speed which may be sufficient to spoil a picture. Roller-blind and focal-plane shutters are apt to cause a variation of exposures when the camera is used in an inverted or other unusual position. Sometimes, it is possible to prevent any serious difficulty by tightening the tension-spring so that the shutter will be sure to close. Let it be clearly understood that nearly all standard shutters, of whatever type, will give efficient service when used in a normal position; but there are times when the photographer cannot use his equipment as he would like to do; it is then that he appreciates a shutter that will give reasonably efficient service in any position. However, no camerist should be hypercritical with regard to his shutter when he makes unusual demands upon it, and he should know at the outset that variations of exposure may occur.

Most shutters, as manufactured to-day, will stand considerable abuse; but it should be remembered that, after all, their mechanism — especially in the high-speed models — is as delicate as that of a watch. It is really remarkable what service some shutters have given in circumstances that are almost unbelievable. At the same time, it is likewise remarkable what a trifle

will put a shutter out of commission completely. The secret of permanent success with any type of shutter is to study it systematically and thoroughly. However, I do not infer that the shutter should be taken to pieces. Unless the camerist is a skilled mechanic, he should let the interior mechanism of his shutter *strictly alone*. The manufacturer or a trained photo-mechanic — and no one else — should be entrusted with a shutter that is out of order. This advice cannot be emphasized too strongly or repeated too often.

New shutters of all types as supplied with modern cameras and lenses will give years of efficient service, providing that they are cared for properly. That is, care should be exercised in the daily use of the shutter; by closing the camera carefully, to avoid any strain on the front-board; by manipulating the shutter according to directions, and by avoiding all inducements to "experiment." Many an excellent shutter has been ruined by those who wished to do something with it that was different or thought to be original. The fact remains that every reliable manufacturer knows accurately what his shutter will or will not do — it behooves camerists to bear this in mind and to respect the manufacturer's advice if they expect to make good pictures.

For some unknown reason not a few camerists refer to the speed of their lenses in terms of shutter-speeds. That is, one says that his lens works at a maximum speed of $\frac{1}{1000}$ of a second. He means to say that he has a fast anastigmat lens — say $f/4.5$ or $f/5.5$ — with which he can make excellent pictures with his shutter set at its maximum speed of $\frac{1}{1000}$. Another camerist regrets that his lens is as slow as $\frac{1}{25}$. Of course he means that his lens — probably a meniscus achromatic — will not produce a well-timed exposure at a shutter-speed exceeding $\frac{1}{25}$ of a second. The speed of the shutter has no speed-relation whatever to the speed

of a lens. Any relation that exists is one of capacity. One would not think to utilize a powerful fire-engine to pump water through a half-inch garden-hose. Likewise, a fire-hose without a fire-engine is not delivering its maximum amount of water within a given time. Hence, to use a focal-plane shutter with a speed of $\frac{1}{1000}$ of a second in connection with a Brownie camera-lens does not make the lens capable to make speed-pictures, and it would be as absurd to think so as the simile of the fire-engine trying to pump water through a garden-hose. In short, if a lens is so constructed that it will admit a great volume of light, even when it is used with a high-speed shutter, such a lens is considered to be "fast"—not because of the shutter, but because the lens itself admits enough light to be used satisfactorily with a fast shutter.

Confusion sometimes arises with regard to the focusing-scale and shutter-speeds. Because it is possible to set the focusing-pointer between twenty-five and fifty feet, and dividing the distance, it does not follow that the speed-indicator on the shutter may be set indiscriminately in any position. Furthermore, let it be understood that to set a speed-indicator on a shutter between fifty and one hundred does not produce necessarily a speed of one seventy-fifth of a second. *More often it produces a disabled shutter.* In no circumstances attempt to improvise different speeds. The shutter-speeds on modern shutters have been decided upon after long experience, and they have been found to be satisfactory for nearly every amateur and professional requirement within reason.

A. H. BEARDSLEY.

A Word for the Plate-Camera

FOR some unaccountable reason many amateur-photographers appear to shun the plate-camera in favor of the roll-film equipment. The peculiar fact about this decided preference is that it is not due always to technical photographic reasons, but more often to an unreasonable aversion to the use of plates. This aversion, which is unjustified on the part of the average camerist, is unaccountable to those who know the important place that plate-cameras occupy in the equipment of the best-known amateur and professional workers throughout the world.

The roll-film camera has its advantages, and it is not my intention to belittle its efficient service in thousands of cases where a plate-camera could not be used advantageously. However, the owners of plate-cameras are able to rally to the support of their equipments and to tell of remarkable photographic exploits at home and abroad. As the old landlord in "Silas Marner" remarked to guests who were inclined to be too combative, "The truth lies atween you: you 're both right and both wrong, as I allays say!" In short, my present word for the plate-camera is not so much in its defense as it is to point out a few of its features that are of value to camerists irrespective of any equipment that they might have or prefer.

The use of glass-plates is not as bothersome as many amateurs suppose. Modern plateholders are well built, light and can be loaded easily. A darkroom is not required to load the plateholder, as a changing-bag is now supplied with which it is possible to load and unload plates in broad daylight. With regard to developing, the changing-bag is again employed to transfer the plates from the plateholders into the developing-tank, after which developing may proceed in daylight with perfect safety. A distinct advantage of the dry-plate is the opportunity it gives the camerist to make an exposure and then to develop it *at once* without sacrificing other unused exposures or being obliged to

wait until all exposures on a roll of film are made. Another gain that the owner of a plate-camera enjoys is the chance to select the right kind of dryplate for the work in hand. There are fast, medium, slow, non-halation, panchromatic, orthochromatic, contrast and other types of dryplates on the market to-day. Then there are the famous Lumière autochromes and the well-known plates for photography in natural colors.

The outstanding feature of plate-cameras is the great advantage of the ground-glass on which the image is focused as it is to appear on the plate. This fact, alone, is of inestimable value to the camerist. It means—all things being equal—that every picture made will be focused correctly; that it will be composed to better advantage, and that it will be exposed properly. Many attractive plate-cameras are fitted with a double- or triple-extension bellows, which permits the use of the single elements of the lens to obtain larger images of distant objects and also to do enlarging and copying. These models are equipped, usually, with rising-and-falling lens-front, swing-back, drop-bed, sliding-base and other adjustments of great practical value. The efficient use of telephoto-lenses to obtain views of inaccessible mountain-peaks, buildings, ships at sea, etc., is confined virtually to plate-cameras.

Those who complain of the weight and bulk of plate-cameras are reminded that the foremost travelers, lecturers, scientists and photographers have carried plate-cameras to the four corners of the earth. Why? Certainly not because they enjoyed carrying the heavy equipment. An article well worth reading is the excellent one, "The Camera in Camp," by Charles M. Mansfield, in the June, 1917, PHOTO-ERA. To quote, "Every man is a crank on a certain equipment, and in my case I obtained the best results with a 5 x 7 view-camera with an extra long bellows fitted with an anastigmat lens. I have carried such a camera many thousands of miles into the northern woods of Canada, down into the Everglades of Florida, across mountains, on my back, in baggage and freight cars, in canoes and on the backs of pack-animals, and the most harm that has ever happened to it has been the breaking of a couple of ground-glasses." Though the practical efficiency of the roll-film camera has been proved, the plate-camera still holds a position all its own.

A. H. BEARDSLEY.

Using a Developer More than Once

NOW that our chemicals cost us more, photographers have to look round more carefully to make sure that no reasonable economy is neglected, and economy in the use of developing-solutions seems to be a very promising field. No one can dispute the fact that the actual quantity of pyro, metol, etc., that is used for developing a negative is only a minute fraction of the quantity present in the solution, and that when this is used only once the greater part of the comparatively expensive chemical goes down the sink. The question is to what extent this can be avoided without in any way lessening the quality of the work. The cost of the developer required for a single negative is so small compared with that of the plate itself, and still more with the value of a good negative, that no one will doubt that, whatever the apparent waste, the quality of the result must not be allowed to suffer.

The custom of using the developer once only and then throwing it away no doubt originated when pyro was the only available substance and the use of sulphite was unknown. A pyro-ammonia or pyro-soda developer made up without any sulphite or metabisulphite becomes quite black in the course of developing a single plate, and if used for a second would not only stain it,



THE STORY-HOUR

LENA M. TEWKESBURY

SECOND PRIZE — BEGINNERS' CONTEST

but would be found very much weakened by the oxidation which with such a solution is so rapid. The rapid blackening of the liquid itself is evidence of such oxidation. Now that sulphite or its equivalent is always present in the developer the case is different.

The reasons given for the advice to use the developer once only are that by using it we not only weaken it in developing-power to some indefinite extent, but it also becomes more highly restrained, since one result of developing a plate is the formation of soluble bromide in the solution.

The dilution and exposure to the air also facilitate oxidation of the developer, which is shown by it changing to a dark color. An oxidized developer has a great tendency to stain the film, as well as the fingers and nails. Allied to this is the fact that, as a number of negatives in succession are developed in the same lot of solution, the color of the image tends to become less and less of a pure black as the operation proceeds.

The most serious alteration is that which is brought about by the formation of bromide. The modern tendency is to do away with bromide in the developer when it is applied to the plate, relying on what is formed as the developing action proceeds to keep the negative clean. That the bromide formed by the development of the latent image does actually exercise such an effect is shown by developing, intentionally or accidentally, an unexposed plate or film in a dish by itself. If left in a developer of the usual strength for the usual time it will be found to be badly fogged, although an exposed result treated for the same length of time in an identical solution will develop up with no fog at all. The explanation is that the exposed plate forms bromide in the developer by the action of the solution on the exposed silver salt, and so it is only for the first few moments

that a full strength unrestrained solution is acting, whereas the unexposed plate, forming no bromide, is exposed for the whole time to a full strength developer, and so is fogged.

Bromide added to a developer in small quantities is not actually injurious, provided the plate has been fully exposed. It delays development, but does not make any other difference that need be taken into account. But if the exposure has not been ample, the presence of bromide has the effect of increasing the apparent underexposure, and giving a hard negative without detail in the shadows. In the case of overexposed negatives, the bromide does no good, except to make the negative a little less opaque; but in such cases it has no ill effects at all.

For the development of plates which are fully exposed, therefore, there would seem to be no reason why one lot of developer should not be used over and over again, provided it does not stain. Hence for work in which the exposures are known, when one can count upon having no cases of underexposure, we may effect an economy of this sort without fear. For studio-portraiture, for copying and other exposures made at home under such conditions that an error in exposure is easily remedied by the use of a second plate, therefore, we may use the one lot of solution as long as it is acting quickly enough for our purpose.

A professional photographer, an acquaintance of the writer, whose work is of a very varied character, uses M.Q. for his bromide and gaslight-prints, and when this has been so far modified by use that there is any risk that the prints will not be of a good color, he pours it back into a stock-bottle, and subsequently employs it for negative-work.

A. M. KNIGHT, in *Photography*.



ANSWERS TO QUERIES



Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.

G. B. G.—The quickest method to mark plates is to do so with a lead-pencil on the margin. By that, we mean to place a small number or letter in one corner, and then, on a piece of paper or in a notebook, set down whatever corresponds to the number or letter that you have written on the plate. The writer has developed hundreds of plates, and has always found that this method, simple as it is, has avoided any complications. The methods to mark plates are so varied that there is no limit to the means to keep each negative separate from any other negative. It matters little whether it is one negative or two or three dozen negatives in one batch. In either case the use of a letter or a number in rotation will keep each plate separate. As an example, suppose you have twelve plates which you wish to distinguish from fifty other plates. Before loading into the plateholder, mark in one corner of each plate, beginning, we will say, with A1, A2, A3, etc., to A12. The lead-pencil mark will not be removed through any chemical action necessary to develop and fix the plate. When the process is completed, and the plates are dry, each plate will bear the number, as indicated above, and you will have no difficulty to distinguish it from the others.

J. G. M.—A small camera, taking pictures 1½ x 2½, equipped with anastigmat lens with a speed of F/3.5, may be obtained, providing that the fitting is done by a competent optician. It has been found possible to take a lens, such as the Goerz Kino High-Power F/3.5, three-inch focus, and fit it to a compound shutter, which again may be fitted to a Goerz V. P. Tenax Camera. The entire matter depends upon whether you are able to obtain such a camera new or second hand, and also whether the C. P. Goerz American Optical Company, 317 East 34th Street, New York City, would be willing to consider making the required changes. We would suggest that you write to them direct.

A. M. H.—The curvature obtained now and then in panoram-prints is due to the fact that the lens in your camera swings on an axis. Whenever you are photographing straight lines, such as a street or a fence, these lines are apt to curve, due to the fact that the lens is in motion. In the Cirkut cameras, mentioned in our previous letter, the film itself is moved by a clock-work mechanism and the lens remains stationary. In this way there is no distortion, and a picture of any sweep, even an entire circle, may be made with excellent results. We would suggest writing to the Eastman Kodak Company, Rochester, N. Y., for their latest descriptive matter dealing with Cirkut cameras. The information which you will obtain will be both instructive and interesting.

F. C. K.—Optical glass is affected to a greater or lesser degree by light and atmospheric conditions. Some glasses are more sensitive than others. As a rule, the anastigmat lenses are apt to be affected more than cheaper lenses because high-grade lenses receive a higher polish. It must be remembered that highly polished optical glass closely resembles highly polished steel in that light and moisture cause corro-

sion. In some cases, lenses that are protected carefully never show discoloration or other defects—even after years of service. The photographer should see to it that his lens is always capped or otherwise protected from light and moisture when it is not in use. You should never leave a camera and its lens exposed to direct sunlight, for by so doing you may not only fog the unexposed plates or films, but cause serious damage to the lens.

W. O. C.—There are three general types of lens-construction mentioned in lens-catalogs. An unsymmetrical lens is one whose front or back combination, usually, may not be used alone. A symmetrical lens is one which permits the use alone of either front or back combination. As a rule, both are of the same focus. A convertible lens is one in which the front combination is of a different focus from that of the back combination—thus giving three focal lengths in the same lens. To illustrate: an unsymmetrical lens might be of 6-inch focus only; a symmetrical lens of 6-inch and 12-inch focus; and a convertible lens of 6-inch, 9-inch and 14-inch focus.

J. S. R.—With regard to a Bausch & Lomb Plastigmat F/6.8 lens as compared to the newer low-priced F/7.5 lens, we beg to state that if you intend to confine your photographic work within the scope of an ordinary roll-film camera, and do not intend to use the lens to copy, enlarge or do telephoto work, we believe that the lower-priced F/7.5 lens will meet your requirements efficiently.

On the other hand, if you intend to do several kinds of photographic work with a long bellows-extension, rising and falling front and other attachments for serious photography, we believe the B. & L. Plastigmat will serve you to better advantage. The F/7.5 lenses are specially made for use on roll-film cameras, and for that purpose they are in most respects equivalent to the high-priced lenses; but should you use one of these lenses on a different equipment, such as a high-grade long-extension plate-camera, the lenses would not cover satisfactorily, nor would they serve you as well as other lenses higher in price.

N. T. B.—The Goerz Dogmar F/4.5 lens will meet your requirements satisfactorily if your camera has sufficient bellows-extension. You will be able to utilize the three-focus advantage; namely, the complete lens, the front combination and the back combination. By writing to the C. P. Goerz American Optical Company, 317 East 34th Street, New York City, you will obtain complete data as to the exact focal lengths of the various combinations. Without reserve, we can state that the lens, for the purpose you intend to use it, will meet every test.

J. H.—Development of negatives by the glass-positive method. Make your glass positive by contact, as you would a lantern-slide or window-transparency, and from that make as many negatives as you wish. If you wish to make enlarged negatives, first make an enlarged positive in the enlarging camera by any of the light-sources that are popular and effective. Many professionals make these enlarged positives by direct daylight—a very simple matter—and from these enlarged positives make contact negatives.

C. K. O.—Most shutters may vary in speed if turned on their sides or inverted. This possibility should not be overlooked, particularly when engaged in making important pictures. The variation may not be very great, and probably in most cases the camerist would experience no trouble. If roller-blind or focal-plane shutters are being used it is well to make sure that the tension-spring has been tightened sufficiently to close the shutter—no matter in what position it may be held.



PRINT-CRITICISM



Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.

N. A.—“Early Morn” (two rows of corn-shocks in perspective) — This is a rather hackneyed subject. The arrangement is too symmetrical; i.e., the three shocks at the left and the three at the right being too similar to yield much variety, although the tree at the right helps a little in this respect. The sky is blank, which might have been avoided, or a deeper tone might have been given to it, beginning at the top and graded down toward the horizon line.

by scattered highlights. Do not forget the principle laid down by PHOTO-ERA. and exemplified by an illustration some time last year, to the effect that, if anywhere, it is in still-life that simplicity of composition — fewness of objects — should prevail.

P. G. D.— Your picture is somewhat indistinct. It is not of a character to warrant any negligence or carelessness in the definition. Unfortunately, the picture is divided in two nearly equal parts — itself a violation of good taste and artistic composition. There is a lack of central interest. The interest is scattered, as you see — the sky visible through the tops of the trees, the scattered mass of pebbles in the middle of the reflection at the bottom. The picture lacks centralization of interest.

M. H.— The best picture in the lot is “Miss T.” It is in a uniformly high key, well posed and lighted. Not knowing the lady, we cannot pass judgment upon the features, although it seems to me that the width between the nostrils appears slightly exaggerated. This can be obviated, mostly by lighting, although the focal length of the lens plays an important part. In



MONUMENT VALLEY PARK, COLORADO

DR. B. FRANK GRAY

THIRD PRIZE — BEGINNERS' CONTEST

L. L. B.— No apparent arrangement or center of interest, unless it be the group of trees a little to the right of the center. This group is dominated, however, by the very dark tree-trunk at the right foreground, and which, itself, is equalized by one at the opposite side. Of course the original view was delightful to the eye, but in the photograph the effect is less interesting. There were possibilities which, however, you do not appear to have utilized to the best advantage.

S. S. S.— Your picture of fishing-tackle as a life-study is commendable, but it does not appear to call for the use of a soft-focus lens. Here, the objects are of a character that appear to require clear definition. They are also so near to the observer that only defective vision would cause the indistinct result that you have here portrayed. Moreover, the arrangement is marred

“Mrs. A. A. B.,” there is nothing objectionable, as the result appears to be the strict adherence to the physical aspect of the sitter. “Miss H.” is very pleasing; perhaps, really, the best picture in the entire lot were it not for the eyes, which have a somewhat staring expression. Had the eyes been lowered a trifle, the effect might have been more desirable. The slight shadow on the left side of the neck could have been modified in the negative with material benefit. The pose is admirable, which refers also to the treatment of the hands. “Doris” is badly placed. Very angular. The dress and hand are arranged not very gracefully, and there should be more margin at the left or behind the sitter. It is more important than camerists realize to pay attention to these seeming trifles. Failure to do so usually results in disappointment.

Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of the time in the table. From 8000 to 12000 feet use $\frac{1}{2}$ of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

*These figures must be increased up to five times if the light is inclined to be yellow or red. †Latitude 60° N. multiply by 3; 55° × 2; 52° × 2; 30° × ¾. ‡Latitude 60° N. multiply by 2; 55° × 2; 52° × 1½; 30° × ¾. §Latitude 60° N. multiply by ¼; 55° × 1; 52° × 1; 30° × ½. ¶Latitude 60° N. multiply by ¼; 55° × 1; 52° × 1; 30° × ½.	MONTH AND WEATHER																			
	JAN., NOV., DEC. †					FEB., OCT.					MAR., APR., AUG., SEPT. ¶					MAY, JUNE, JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
	HOUR																			
	11 A.M. to 1 P.M.	1/32	1/16	1/8	1/4	1/2	1/32	1/16	1/8	1/4	1/2	1/50	1/25	1/12	1/6	1/3	1/60	1/30	1/15	1/8
10-11 A.M. and 1-2 P.M.	1/25	1/12	1/6	1/3	2/3	1/25	1/12	1/6	1/3	2/3	1/40	1/20	1/10	1/5	1/2	1/60	1/30	1/15	1/8	1/4
9-10 A.M. and 2-3 P.M.	1*/12	1*/6	1*/3	2/3*	1*	1/16	1/8	1/4	1/2	1*	1/40	1/20	1/10	1/5	1/2	1/50	1/25	1/12	1/6	1/3
8-9 A.M. and 3-4 P.M.						1*/5	1*/2	1*	1 1/2*	3*	1/30	1/15	1/8	1/3	2/3	1/30	1/15	1/8	1/4	1/2
7-8 A.M. and 4-5 P.M.											1/20	1/10	1/5	1/2	3/4	1/20	1/10	1/5	1/3	2/3
6-7 A.M. and 5-6 P.M.											1/15	1/8	1/2	3/4	1*	1/15	1/8	1/4	1/2	3/4
5-6 A.M. and 6-7 P.M.																1/10	1/5	1/3	2/3	1 1/2*

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

SUBJECTS. For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, to glades and under the trees. **Wood-**
48 interiors not open to the sky. **Average indoor-portraits** in a well-lighted room, light surroundings.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

For Perpetual Reference

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

U. S. 1	F/4	× 1/4
U. S. 2	F/5.6	× 1/2
U. S. 2.4	F/6.3	× 5/8
U. S. 3	F/7	× 3/4
U. S. 8	F/11	× 2
U. S. 16	F/16	× 4
U. S. 32	F/22	× 8
U. S. 64	F/32	× 16

Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/16×4=1/4. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/16×1/2=1/32. Hence, the exposure will be 1/32 second.

Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.
Ilford Monarch
Lumière Sigma
Marion Record
Seed Graflex
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.
Ansco Speedex Film
Barnet Super-Speed Ortho.
Central Special
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Imperial Special Sensitive
Seed Gilt Edge 30
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.
Barnet Red Seal
Cramer Instantaneous Iso.
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Ilford Zenith
Paget Extra Special Rapid
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.
American
Ansco Film, N. C.
Atlas Roll-Film
Barnet Extra Rapid
Barnet Ortho. Extra Rapid
Central Comet
Imperial Non-Filter

Imperial Ortho. Special Sensitive
Kodak N. C. Film

Kodoid
Lumière Film and Blue Label
Marion P. S.
Premo Film-Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso. Speedy
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.
Cramer Banner X
Cramer Isonon
Cramer Spectrum
Defender Ortho.
Defender Ortho., N.-II.
Eastman Extra Rapid
Hammer Extra Fast Ortho.
Hammer Non-Halation
Hammer Non-Halation Ortho.
Seed 26x
Seed C. Ortho.
Seed L. Ortho.
Seed Non-Halation
Seed Non-Halation Ortho.
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.
Cramer Anchor

Lumière Ortho. A
Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.
Cramer Medium Iso.
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.
Barnet Medium
Barnet Ortho. Medium
Cramer Trichromatic
Hammer Fast
Ilford Chromatic
Ilford Empress
Seed 23
Stanley Commercial
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.
Cramer Commercial
Hammer Slow
Hammer Slow Ortho.
Wellington Ortho. Process
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.
Cramer Contrast
Cramer Slow Iso.
Cramer Slow Iso. Non-Halation
Ilford Half-tone
Ilford Ordinary
Seed Process

Class 100, P. E. 11 Wy. 3, Wa.
Lumière Autochrome



OUR CONTRIBUTING CRITICS



YOUR CRITICISM INVITED

A New Photo-Era Contest

MANY of our pictorial contributors evince so high a degree of intelligence in their criticism of pictures in general that, in order to encourage and help develop this valuable faculty, we shall introduce a new competition beginning with this issue. It consists of the reproduction of an excellent photograph, but not perfect in composition. To those who send us the best criticism, before the twentieth of the current month, we shall send, postpaid, a copy of "Pictorial Landscape-Photography," by Paul Lewis Anderson. In the event of several replies being satisfactory, several prizes (the same book), not exceeding three, will be awarded.

The successful replies, not to exceed one hundred and fifty words, together with the picture criticized, will be published on this page in the second succeeding issue.

The subject of composition in landscape-photography is one that interests every camerist. Naturally, more exposures are made of landscapes than of any other outdoor-subject. The main thing to be remembered is the principle of simplicity and harmony. Mr. Anderson is an eminent exponent of pictorial photography in its highest sense, and he has never appeared to better advantage than as the illustrator of his now celebrated work, "Pictorial Landscape Photography." The book is devoted to an exhaustive analysis of the qualities that are necessary to a successful open landscape, in summer or in winter, wide country-road, a view with a stretch of water or to a landscape with a single figure as accessory, as shown in fourteen full-page halftone plates.

Figure-Composition in Landscape

PROSPECTIVE pictorialists desirous to improve their picture-making abilities with reference to a standard work on figure-composition are advised to consult the volume on this subject by Sadakichi Hartmann (Sidney Allen). This is a *de luxe* publication, 7½ x 10½ inches in size, beautifully printed on heavy coated paper, gold top and sides, and illustrated with over 150 halftones (from celebrated paintings and appropriate photographs by well-known pictorialists) and diagrams. This superb volume is from the pen of one of the foremost living art-critics, and is designed to guide amateur photographers to successful efforts in composition of landscapes with and without figures. The work was published, originally, at \$3.00, but PHOTO-ERA procured 150 volumes at a special price, and will sell them to its readers at \$1.50 a copy, sent by express collect, or by parcel-post (consignee's risk), postage according to zone. Each copy, in a neat cardboard box, ready for shipment, weighs 33 ounces.

To Photo-Era Readers

THE Publisher earnestly requests the readers of PHOTO-ERA to give the preference of their patronage to goods and wants advertised in PHOTO-ERA; for no advertisement, whether large or small, is accepted unless it is trustworthy in every respect. This should be of vital importance to all buyers of photographic material, amateur and professional.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



HERBERT W. GLEASON, author of the view of Yosemite Falls which adorns the current front-cover and page 127, did not place himself in the position, like many others who have photographed this magnificent natural spectacle, to be obliged to say, "I can't help if my picture of Yosemite Falls is flat and monotonous; that's the way it looked when I was there and photographed it. Blame the light-conditions, not me." Mr. Gleason visited Yosemite Valley, as he does the other National parks, for the purpose to make photographs of its beauty-spots, and, being an able and experienced craftsman, he chose his light advantageously. It will be noticed that the light falls obliquely upon the fall and its setting, and that there is a virtually complete scale of gradations, the highest light being the principal fall; also that the reflection is not as seen in a huge mirror—a feature apparently the aim of most photographers, and to obtain which requires no special technical ability. Mr. Gleason's effort is the result of excellent judgment from the selection of the view-point to the finished print. Data: 8 x 10 Korona view-camera; 12-inch Goerz; stop, F/11; $\frac{1}{50}$ second; Orthonon plate; pyro-soda; 8 x 10 Kresko print.

There are many advanced amateur workers who will exclaim, upon seeing Mr. Walinger's portrait-study, page 110, "Nothing remarkable. Conventional professional work!" I wonder if any of them will stop to consider the amount of study, experience and skill this "conventional" portrait represents, and, even given the apparatus and studio that Mr. Walinger had at his command when he produced this picture, if one of them could have come within twenty-five percent of the excellence of his result. As a matter of fact, this is a demonstration-portrait, made without any preparation, under an unaccustomed light, of an unfamiliar model, at the Photographers' National Convention, Cleveland, 1916. But the artist, who is one of the master-photographers of this country, was equal to the demands made upon his skill, and, illustrating his methods of lighting and arranging the sitter, before a large gathering of brother-craftsmen, exposed several 8 x 16 plates with uniform success. The present portrait is one of them. The qualities so highly esteemed by expert portraitists—skilful and appropriate lighting, correctness of drawing, roundness of presentation, simple and artistic arrangement and good chemical effect—are here exemplified in a masterly manner. The refined beauty and grace of the model—not to overlook her charming coiffure—helped in no small degree to bring about so delightful a result. No data.

Although not faultless, Mr. Taylor's camping-scene, page 113, has much to commend it to PHOTO-ERA readers. The wholesome outdoor spirit, the grouping of the campers and the correctness of the tone-values deserve praise. The middle figure is conscious of the presence of the camera, which is an unpardonable sin: the background has retired beyond the focus of the lens and assumed an uncertainty of definition, while the areas of sky and water, by their placement, add little to the composition. Data: June, 2 p.m.; fair light; Popular Pressman ($3\frac{1}{2}$ x $5\frac{1}{2}$); 6 $\frac{1}{2}$ -inch Aldis lens; stop, F/8; $\frac{1}{25}$ second; Standard Orthonon; Ortol.

"The Gothics," page 116, by the late Alexis H. French, an ardent amateur photographer, of Brookline, Mass., is one of a large collection of 8 x 10 views made

by him in the course of several visits to the Adirondacks, in the state of New York. The view of lake—with its background of mountains and clouds—is typical of the picturesque character of New York's principal mountain-group, with its numerous attractive summer-resorts. The picture excels in impressiveness of proportions, tone-values and general technique. No data.

Mr. Worstall's camp-scene, page 117, is another reminder of the "Vacation-Pictures" competition, which closes October 31, and to which it is hoped camerists will contribute. The picture before us has the merit of unusual yet pleasing proportions, and although it is divided into three entirely dissimilar sections, none conflicts with any other. Despite the interest being at the left—among the campers seated before the fire—the eye rests with satisfaction on the nearby lake, seen through a pretty group of birches, and does not decline to linger admiringly upon the pretty wood at the right. We have here a picture of triple interest, yet connected directly and logically, if not according to artistic precepts. This departure appears to be justified by the character of the composition—a panorama, which is often comprehensive and decorative. The outdoor feeling is well expressed by Mr. Worstall, and the workmanship, including values, is very commendable. Data: September, 10 a.m.; cloudy; dull; 5 x 12 (inches) A1 Vista Panoram camera; 6-inch R. R. lens; stop, F/7; no color-screen; $\frac{1}{2}$ second; roll-film; pyro. in tank; direct print on Cyko Normal.

Like many musical artists, Mr. Ralph Osborne, the eminent baritone, is an enthusiastic amateur photographer, and one of rare ability and resourcefulness. His interest in animal-photography has developed a phase that will find numerous imitators, for it is filled with many interesting possibilities, and offers amusement both to old and young.

We quote from Mr. Osborne's letter: "Although, as I have said, these studies can be done with virtually any camera, personally I prefer to work with a 4 x 5 reflecting-camera, as being the most convenient, and out of doors it can be used without a tripod. 'The Bone of Contention,' 'The Early Bird Catches the Worm' and 'Consternation of the Early Bird' were all made on the ground, out of doors, with a 9-inch Smith Semi-Achromatic lens and color-sensitive plates. The other was done with a 7-inch P. & S., Series III, Orthoplan lens. Hammer's Non-Halation Orthochromatic plates were used in each case. All the illustrations in this article are made from 8 x 10 enlargements done with an 8-inch Smith Semi-Achromatic lens."

Although Mr. Osborne has not demonstrated his artistic talent in these toy-creations, he has given a good account of himself in his self-portrait, page 121. We have here a portrait of solid, plastic construction, forceful and dignified in expression, and a correct likeness, as well. Data: 4 x 5 Soho Reflecting; 8-inch Smith (soft-focus); at F/6; evening—500-watt nitrogen-filled bulb in Parallax reflector; 6 seconds; Imperial Duonon plate; Metol, in tank; 8 x 10 print on Cyko Enlarging; a white diffusing-screen was used between the light and the subject.

Although the martial spirit prevails throughout the land, and our people are called upon to make great sacrifices in blood and treasure, nothing will be more

welcome than peace — but peace with honor, permanent peace. Mrs. Cook and Mr. Sutter have expressed this fervent hope, in word and picture, on page 124. This beautiful sentiment emanated from Mr. Sutter, who, imbued with the nobility and universality of his fraternal order, appears to have seen the light. Let us all hope that the vision has not been in vain. Data: July 31, 5 P.M.; $\frac{1}{2}$ second; Hammer Blue Label; R.R. lens; stop, U. S. 8.

When it is remembered that the great painters and sculptors have drawn upon the industries for subjects of artistic expression — Velasquez, "The Weavers;" Paul, the Veronese, "Arachne;" Millet, "The Gleaners," and Aizelin, "La Fileuse," for example — one wonders why photographers have not entered this field, which is so rich in illustrative material. To be sure, they have utilized certain agricultural activities, such as haying, plowing and mowing — even *ad nauseam* — but many more are left. The commercial industries, too, offer a prolific field for exploitation (we have seen the cobbler several times), and Kenneth Dows, page 126, has chosen a somewhat unusual theme — etching. Mr. Dows has shown admirable judgment in the management of his subject, and, while he has not slighted the artist nor the accessories, he has placed the strongest emphasis upon the press, upon the product of the operation — the etching. On the other hand, if the etcher were to possess the dominating interest, then he, the operator, the producer, would stand out most conspicuously. Data: February, 1917; light from high cellar-window, sunlight outside; Standard Orthonon, Ross 17-inch Telecentric; stop, F/5.6; 45 seconds; platinum print.

The seven pictures of natural scenery by V. Akers, pages 128 to 132, are the work of a professional landscape-painter, like William S. Davis, whose natural taste and professional training enable him to discover and appropriate the pictorial elements of the scene. Very naturally, too, he will avoid the mistake made frequently by camerists to introduce an excess of material or to divide the interests. It is interesting to note how the painter-photographer discriminates in his choice of pictorial themes and with what facility he obtains his proportions. That Mr. Akers is a capital photographer needs no argument. He evidently realizes how closely pictorial photography is allied to painting, and that the excellence of the result is in proportion to the skill and judgment exercised in the use of brush and palette and of lens and printing-medium.

As to his method of working, Mr. Akers writes: "My camera is an ordinary 3A Brownie, $3\frac{1}{2} \times 5\frac{1}{2}$ size, my lens a Verito Special, 6 $\frac{1}{2}$ -inch focus, Eastman N. C. films for my orthochromatic properties, and a set of Wratten and Wainwright K-1, K-2 and K-3 color-filters, which I use in the two-inch squares with an adjustable holder. This outfit, on an old, heavy and staunch 8 x 10 camera-tripod, completes my field-equipment."

In "Beach-Photography," page 135, Foster Lardner has displayed a fine sense of balance — one of those examples of figure-composition where a single figure counteracts a large number. The scene is a novel and interesting one. Data: August, 1917, 11 A.M.; brilliant light; 3A Special Kodak ($3\frac{1}{2} \times 5\frac{1}{2}$); 6 $\frac{1}{2}$ -inch Zeiss Kodak lens; stop, F/22; no color-screen.

The view presented on page 136 shows the most remarkable group of skyscrapers in the world — remarkable both for height and architectural beauty. The latter quality certainly belongs to the Gothic Woolworth Tower (freed of the present scaffolding) and the majestic Municipal Building (not visible here). Our picture was made, evidently, over a year ago, for several tall structures, including those of the Equitable Life, the United States Express and the Telephone and Tele-

graph, completed since, are lacking. However, viewed as it is, from a point opposite the Battery, the scene is one of impressive beauty, and with an American dreadnought passing by, it awakens thoughts of apprehension among the nervous; for what costly damage might not be wrought by an enemy warship lying off Sandy Hook? The principal of these towering office buildings, beginning at the left, are the West Street Building (403 feet); the Woolworth (750 feet); the City Investing, with the gabled roof (486 feet); the adjoining Singer Tower (612 feet); the immense Whitehall, this side of it (424 feet), and the Bankers' Trust, colonnade surmounted by pyramidal roof (539 feet).

In an early issue, we hope to publish a quite recent view of lower New York, showing to the best possible advantage the most prominent skyscrapers, including the beautiful Municipal Building — fourth tallest structure in New York — the Woolworth, the Western Union, the new Equitable, and others seen best from the Brooklyn side.

The original of the "Skyline of New York" is a copyrighted photograph, a bromide enlargement of striking effectiveness, issued by the Detroit Publishing Company, and is one of the most popular pictures ("best sellers") in the art-stores.

Advanced Workers' Competition

PICTURES in which their authors have succeeded best in interpreting the spirit of spring appear in this department at this time. Mr. Martin certainly has caught the feeling of the year's initial season, with its prevailing soft, ingratiating atmosphere and delicate tones of color. The placement in the picture-area of the blossoming apple-tree is very happy, amid the pretty, gentle slopes of fresh, young verdure, and a glorious sky overhead. Data: 11 A.M.; bright light; 5 x 7 camera; Collinear lens, 7 $\frac{1}{8}$ -inch focus; at full aperture (F/7.7); 3-time ray-filter; $\frac{1}{16}$ second; Standard Orthonon; M. Q. tube; in tray; enlarged print (8 x 10) on Glossy Enlarging Cyko.

Mr. Dimbleby's picture, page 141, owes its attractiveness to the little girl busily gathering "Flowers on Life's Pathway." The subject is one familiar to PHOTO-ERA readers, but, in this instance, the artist has treated it in an unconventional manner by placing his camera considerably below the subject of his theme. Owing to the bright sunlight and the dark landscape, the tonal gradations are few and the effect is sharp contrast. The values are good, however, and the general result forcefully pleasing. Data: May 20, 1917, 5.30 P.M.; Ansco Vest-Pocket No. 3 ($2\frac{1}{4} \times 3\frac{1}{4}$); 3 $\frac{1}{2}$ -inch Goerz Celor, F/4.8; stop, F/6.8; $\frac{2}{5}$ second; Ansco Speed Film; tank-developed; print on Enlarging Cyko Contrast Platinum; enlarged five times.

The old, old story is told with romantic truth by Mr. Pertuch, who could hardly have chosen a more delightful setting than a spot in the woods at spring-time. Everything in the picture appears absolutely spontaneous. We are unseen and interested witnesses of the simple incident, but enjoy, in particular, the quiet wood so charmingly presented and suggestive of the melody of birds and the low voices of human love. Data: April, 1917, 10 A.M.; bright light; Hammer Ortho, Extra Fast; pyro; Collinear rear lens, F/8; $\frac{1}{5}$ second; enlarged print on Artura Carbon Black.

Beginners' Competition

ACTUATED by the spirit of patriotism, many workers have attempted to picture the American flag, but generally with little artistic success. They then tried their
(Continued on page 161)



ON THE GROUND-GLASS

WILFRED A. FRENCH



Dangers of an Improvised Darkroom

THE user of a daylight-loading camera does not realize what he has to be thankful for. When an exposed roll-film is to be replaced by a fresh one, he simply performs the operation in broad daylight; but the user of dryplates, desiring to recharge his plateholders, needs to worry about a place where it can be done in safety. If the darkroom of a professional or of a camera club, or a perfectly dark closet in some hotel, is not available, he resorts to the next best thing—he improvises one. The hospitable owner of a cottage by the roadside invites him to use the closet under the stairs. Grateful of the chance, our camerist enters; but hardly has he closed the door behind him when he observes broad beams of light entering above and below the door. He explains the situation to his host, who gladly shuts the front-door and lowers the window-shades, thus excluding the afternoon-sun. Submitting himself to solitary confinement, the camerist breathes a sigh of relief, for the door appears to be light-tight. But, behold!—another streak of light greets him from a place where the clapboards have parted. He pulls off his coat and stops the leak. He is about to open his box of unexposed plates, when he observes two parallel rays of light falling directly in front of him. He quickly claps the cover on the box, and, with the aid of some papers drawn from his inside coat-pocket, and a few pins, he succeeds in shutting out the intruders. That was a lucky escape.

He begins to grow more cautious. He waits, so as to become more accustomed to the darkness, hardly noticing the stuffiness and heat of the place. Chancing to turn around, he notices with horror that light still enters above and below the door; but his vest serves admirably as a check for the base, while his dark cravat takes care of the top of the door. Fortunately, his disrobing-process stops right here. A faint ray of light coming from the keyhole does not trouble him; he covers it with his body. His feverish anxiety and physical efforts have caused him to perspire freely; but he is happy, for nowhere can he detect the slightest trace of light—he cannot even notice the hand he passes before his face. All is serene. No; no one opens the door, for he has locked it. He goes through the tedious and trying process of changing and marking his plates in safety and quiet. Replacing his clothes, he emerges from his prison-cell—tired, wet and thirsty, but otherwise contented. He now appreciates the need of a changing-bag, which he heard discussed and recommended at the camera-club only the day before, and decides to procure one. In fact, he lost no time to get it; for several of his plates were spoiled by drops of perspiration falling on them in that stuffy little closet, and, what came nearly being worse, he had an awful time to recover some private letters which he had placed over a leak and neglected to take with him. Moral: See that your improvised darkroom is *absolutely safe* before you begin to uncover a plate; or, better still, provide yourself with a changing-bag.

Toy-Photography

WITH Grace Rutter's practical essay on the use of culinary dishes in photography fresh in mind, I gazed

with amazement on the array of miniature trays on the counter of a nearby photo-dealer. To induce the beginner to do his own work, these dainty, shallow dishes, for prints varying in size from $2\frac{1}{2} \times 3\frac{1}{2}$ to 4×5 , have colored pictures in the glass-covered bottom and tiny handles at the ends. Fascinating things they were, to look at, but of little practical use on account of their diminutive size. Therefore, one has to hand it to Miss Rutter for her extremely intelligent and practical way to use the pans and trays of the kitchen! Her article appeared in the preceding issue of PHOTO-ERA and elicited hearty praise from all sides. In this connection it may be well to ask the question: "When will the amateur practitioner learn to know that the photo-chemical operations require spacious trays, with plenty of solution and chance to keep it homogeneous—uniformly mixed—with no possibility for ingredients to settle and thus cause spotting and streaks in the prints?"

The Well-Informed Photo-Salesman

WHEN, in reply to a polite inquiry whether he has read so-and-so's article in so-and-so's photo-magazine, the salesman behind the kodak-counter says, "No; I never read the photo-journals," one has reason to think that such a clerk is not eager to add to his stock of knowledge. How much more valuable would he not be to his employer were he to acquaint himself with the contents of a standard photo-magazine as it reaches his counter each month. A customer is very likely to prefer a photo-salesman who is well informed and, when time is not too precious, can discuss with intelligence and profit the happenings in the photographic world. Even if there is no time to look over the photo-magazine during business-hours, it can be taken home and examined there. Both text and advertisements are interesting, as they indicate current photographic conditions and progress.

Modern Journalism

THE new member—a professor of history at a distinguished American university—in order to express his appreciation of the hospitality he had enjoyed at the — Club before being elected to membership, had offered to give to the members of the club a series of talks on modern history, free of charge. The house committee is now considering this courteous offer. That such a course of instruction is advisable may be gathered from the fact that certain members are a little shaky regarding European history. For instance, as editorial writers on prominent daily papers they have stated that the Kaiser's name is William III, and that of his father, Frederick William III; whereas it should be William II and Frederick III, respectively. Fred. William III was the husband of Queen Louise of Prussia. The present pope has been referred to as Leo X; Frederick the Great as Alexander the Great; Napoleon III as Emperor of the *third* French empire; that the relations between France and the United States have always been absolutely friendly. There are other anachronisms equally ludicrous; but whether these humorists would welcome an opportunity to acquire accurate historical knowledge, remains to be seen.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



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"And for your country, boy, and for that Flag, never dream a dream but of serving her as she bid you, even though the service carry you through a thousand hells. No matter what happens to you, no matter who flatters you or who abuses you, never look at another flag, never let a night pass but you pray God to bless that Flag. Remember, boy, that behind officers and government, and people even, there is the Country Herself; your Country, and that you belong to Her as you belong to your own mother. Stand by Her, boy, as you would stand by your mother."

Edward Everett Hale.

Gratuitous Criticism of the American Flag

HERE'S a case that puzzles me and my associates. When an English cotemporary invites American pictorialists to help make the next London Salon a success by contributing their finest work, despite the well-known difficulties of transportation across the Atlantic, and, at the same time, refers to the Stars and Stripes in a manner that is disrespectful, if not insulting, something must be wrong with the publishers or the editor of that particular journal. Certainly, this expression of disrespect would seem to call for an apology. To speak slightly of the American Flag at a time when proud Albion is looking to the United States for aid is in bad taste, to say the least. The American photographic press has always shown a spirit of cordiality towards its English cotemporary, and, during the critical times of the past two years, has not hesitated to express its admiration for British determination and pluck, so that for an English photographic journal to forsake its obvious field of journalism and treat the symbol of American liberty with disrespect does not impress me as a tactful attitude. Here are the remarks to which I make bold to object:

"One of the most hopeless of flags from the point of view of pictorial design — I trust I shall not enrage any fervent American bosom — is the Stars and Stripes. It is so very elementary. *It seems to offer you a choice of two extremes in trousersings.* But even this can be toned down and ennobled by photography. Its feaful

patterning can form a picture such as Mr. Mortimer has made of it in his 'camera-fact' in the summer-number of the *Graphic*. I hope that this passage will escape the editorial eye; but I should not like the picture itself to escape the eye of my readers, for if ever a piece of drapery became alive and eloquent it is this. It is the pulse-beat of America. I mention it, because I think it introduces rather a new motive into photography — that is all."

W. A. F.

Convention of the Ohio-Michigan and Indiana Photographers' Associations

THE convention of the Ohio-Michigan and the Indiana Photographers' Associations, July 31 to August 3, resulted in the unanimous vote to amalgamate the two associations. The official name adopted is, Ohio-Michigan-Indiana Photographers' Association. The following officers were chosen: C. A. Shubert, Princeton, Ind., president; A. E. Riley, Coshocton, Ohio, secretary; Jack Keiser, Toledo, treasurer; P. Frank Bill, Cleveland, vice-president for Ohio; D. D. Spellman, Detroit, vice-president for Michigan. Cedar Point, Ohio, was chosen for the next place of meeting. All members in good standing of the Ohio-Michigan and of the Indiana Associations were accepted into full membership in the new organization, and later, at the Congress meeting, the new association was granted a charter. The following constitution was adopted:

PROPOSED CONSTITUTION FOR THE AMALGAMATION OF THE OHIO-MICHIGAN AND INDIANA PHOTOGRAPHERS' ASSOCIATIONS

ARTICLE I
Title and Purpose

Section 1. The name of this organization shall be OHIO-MICHIGAN-INDIANA PHOTOGRAPHERS' ASSOCIATION.

Sec. 2. The purpose of this organization shall be:
First, to foster fraternal relations and stimulate good fellowship among the professional photographers of Ohio, Indiana and Michigan.

Second, to co-operate with other photographic societies in the general uplift of the whole photographic profession.

Third, to oppose every movement which tends to hinder the development of the art of photography, or to make it less profitable as a business.

Fourth, to inaugurate exhibitions of photographic productions on a scale commensurate with the progress of the art.

ARTICLE II
Membership

Section 1. Membership shall be of two kinds — active and associate.

Sec. 2. All owners, part owners, managers of studios, or employees engaged in the photographic profession in the States of Ohio, Indiana and Michigan, shall be eligible to active membership. Only active members shall have the rights of franchise; employers may be active or associate members, at their option.

Sec. 3. Photographers, not residents of the above States, manufacturers and dealers, their representatives, editors of photographic journals, artists or art students, student-photographers, and all those engaged in a business of a kindred nature to photography shall be eligible to associate membership.

ARTICLE III
Terms of Membership

Section 1. All members of the association shall pay an annual fee, not to exceed the sum of three dollars, the exact amount for any one year to be determined by the executive board for that year.

Sec. 2. Manufacturers, dealers, or their representatives who hold associate membership, shall not be allowed the freedom of the convention-hall, to transact business, without having previously paid for space or desk-room.

Sec. 3. The annual fees become due January 1st, and must be paid prior to the opening of the next following convention. Any member failing to do this shall forfeit his membership and rights of franchise.

ARTICLE IV
Officers

Section 1. The officers of this association shall consist of a President, two Vice-Presidents, Secretary and Treasurer. They shall constitute the Executive Board. They shall take office 60 days after their election, and shall remain in office until 60 days after their successors are duly chosen.

Sec. 2. The office of the President shall regularly pass from one state to another in the order of the initials of the states, and the Vice-Presidents shall be chosen, one from each state not represented by the President.

Sec. 3. A Committee to nominate officers for the ensuing year shall be appointed at the first session of the annual convention, to report at the second session. This Committee shall consist of one representative from each state.

Sec. 4. The election of officers shall be held at the morning session of the third day, unless postponed by majority vote of the association, and shall be by ballot, unless otherwise ordered. A majority of votes shall be necessary for a choice.

Sec. 5. All persons elected to office shall signify their acceptance upon notification.

ARTICLE V
Meetings

Section 1. The convention of the association shall be held annually, except when, owing to the proximity of the meeting place of the Photographers' Association of America, it shall be deemed expedient by the executive board to postpone the meeting.

Sec. 2. The annual meeting of the executive board shall be at the time and place selected by the President.

Sec. 3. The place of the next convention shall be determined by a majority vote of the association. The time of the convention shall be determined by the executive board, subject to the approval of the executive board of the Photographers' Association of America.

Sec. 4. Thirty active members in good standing shall constitute a quorum for the transaction of the association's business at the annual convention.

Sec. 5. The proceedings of the meetings shall be governed by and conducted in accordance with the latest edition of Roberts' Rules of Order.

ARTICLE VI
Duties of Officers

Section 1. The President shall preside over all meetings of the association and the executive board, and appoint all committees not otherwise provided for.

Sec. 2. The Vice-Presidents shall assume such duties as directed by the President, and in the temporary absence of the President the duties of that office shall be performed by the Vice-President from the state next in order.

Sec. 3. The Secretary shall be in charge of the advertising for the association, and the manufacturers' and dealers' exhibit-space.

He shall keep fair and correct minutes of the proceedings of the meetings, and carefully preserve on file all reports and papers received by the association.

He shall prepare an accurate and detailed record of the business of his office in time to be audited at the regular meeting of the executive board.

He shall collect all moneys (except the annual membership fees), and turn same over immediately to the Treasurer, taking his receipt therefor.

He shall receive ten percent of the gross receipts of his office as full compensation for his services.

Sec. 4. The Treasurer shall collect all membership fees, and shall be the custodian of the association's funds.

He shall present a statement of his accounts at each meeting of the executive board.

He shall pay out no moneys except on voucher signed by the President and Secretary.

He shall receive five percent of the membership fees as full compensation for his services.

In case of the Treasurer's absence he shall appoint a deputy with power of attorney to perform his duties.

Sec. 5. The Treasurer and Secretary shall each be required to give an indemnity bond in amount that shall be deemed sufficient and satisfactory to the executive board. Said bond shall remain in the custody of the President during the terms of office of the Treasurer and Secretary.

Sec. 6. The Treasurer and Secretary shall deliver to their successors in office all moneys, papers, vouchers, etc., in their custody.

ARTICLE VII
Delegates

Delegates and alternates to the annual convention of the Photographers' Association of America shall be appointed from each state (not represented by the President) by the President and that the acting President act as one of the delegates — representing the third state.

ARTICLE VIII
Auditing Committee

The two Vice-Presidents shall form an auditing committee which shall examine the books of the Treasurer at each annual meeting of the executive board.

ARTICLE IX
Change of Constitution

Section 1. This constitution may be altered or amended by a vote of three-fourths of the members at any regular meeting. A notice to alter or amend shall be given at least one session previous to a vote being taken thereon.

Sec. 2. This association may enact such by-laws, rules and regulations as it may deem proper for its government by a majority vote, provided they are not inconsistent with the provisions of this constitution.

ARTICLE X
Expenses of Officers

This association shall pay the expenses of the executive board when in session, and at the annual convention, not to exceed seven dollars per day and railroad fare for each member present; same to be paid by draft on the Treasurer.

The grand prize of the Diamond Medal was not awarded, as no picture was judged worthy to merit it.

The second prize, of fifty dollars in gold, was awarded to Dr. T. W. Kilmer, New York City, for a picture of an old man's head. Abel's Trophy Cup was won by W. B. Poynter, Cincinnati, for a picture "Pictorial Childhood." The Allison and Hadaway Cup was taken by L. A. Lawrence, Cleveland, for his child-picture, The Wollensak Trophy Cup was captured by J. A. Bill, Cincinnati, for "The Veteran"—a picture of an old man's head, made with a Verito lens. The Association Cup was earned by Frank Scott Clark, Detroit, for his "Highland Piper." Salon-Honors were given to Clark; Williams, of Evansville, Ind.; Dr. Kilmer; Melvin Sykes, of Chicago; Bill, of Cincinnati, and to the Gerhard sisters, of St. Louis.

According to reports, 347 paid membership fees and 135 pins were sold to the wives and daughters of members, making a total attendance of 482. Over 400 attended the ball on the opening night, and about 300 attended the banquet. The Ball and Carnival proved very pleasant social affairs, and the Carnival particularly served to make every one acquainted. The Ansco Company did much to "buoy" up the assemblage with their balloons. Several novel dance-features were introduced by professionals, and gave much pleasure.

The Lectures and Demonstrations

These were of unusual merit. The speeches and talks by Charles L. Lewis, C. R. Reeves, Ben Larrimer, Felix Schanz and others, and the President's address, pertained principally to local associations and the discussion of the amalgamation. Howard D. Beach, of Buffalo, gave an address on the ethics of the profession as applied to the individual which was timely and well received. Anderson Pace gave another of his thoroughly practical talks on advertising. Miss Mamie Gerhard made quite the hit of the convention with her wise sayings and maxims, and one can readily understand "Soul-Pictures" to be the principal product of the Gerhard Sisters' Studio, after becoming acquainted with the leading spirit. Miss Gerhard says: "The customer is always right"—"Resittings are cheerfully given, regardless of how often wanted or who was at fault, or whether or not a change of costume is made"—"Soul must be put into your work if you would picture that which would most appeal to you were the subject your relative"—"Love children"—"Flatter men, and attend to your business"—"Figure-pictures have a strong appeal, especially with men, they are so different from the usual bust portrait"—"Twenty-five percent impression brings little business, but one hundred percent impression makes for success"—"High-priced pictures limit production, but make photography more pleasant and lucrative"—"Cheap work distributed promiscuously belittles the profession; but better prices bring more orders"—"Each picture is worthy of a frame—sell frames and greatly increase your income."

W. B. Poynter's demonstration in Child Portraiture was an excellent example in speed and efficiency, and the results were far beyond the average convention work, most any of the pictures being worthy a place in the permanent exhibit. The pictures shown were complete in every detail to being framed. The tonal quality was good, and concentration of light showed the progress made with artificial light.

Melvin Sykes was handicapped in his demonstration as to light, this being mostly from the back, although some very fine "Lerski" effects were produced, the handicap in lighting, however, in no way hampered his deft handling of the hands and arms. To help out the beauty of line, butterflies and drapery were made good use of. His accessories and background-effects were good, and the light-controlling device used was an excellent idea. Some novel effects were secured by Mr. Sykes in the special demonstration with the Electric Light. Mr. Sykes took the popular and sensible method in his demonstrations and had his class close around him—it was a get-together meeting where instructor and pupil each learned of the other; comments were invited and freely given to the end that one might return home and put into practice what was gotten by the interchange of ideas.

The Art Exhibit

Seldom one finds a collection of pictures of such uniform quality as was shown at the O. M. I. Not one

really bad picture was on exhibition—all showed intelligent thought and care in execution. Six were selected for Salon-Honors—No. 71, "The Débutante," by Frank Scott Clark—a dainty subject daintily rendered; No. 31, "The Prophet," by Gerhard Sisters—the head of a venerable old man in delicate tones of gray; No. 62, "The Dancer," by J. A. Bill—oriental in character; No. 69, "Art, Music, Future," by Melvin Sykes—a grouping of female figures purely decorative, very nicely carried out; No. 24, "Marguerite," by R. M. Williams, Evansville, Ind.—child with daisies, a Dorotype of unusual merit; No. 23, "Old Man's Head," by T. W. Kilmer, N. Y.

The "Diamond Medal Exhibits" for the six years past, belonging to the Indiana Association, were on display, and served as an inspiration to those present to strive to excel, and as an example of comparison for the judges. These form a superior collection, and are by such master-artists as R. C. Nelson, Frank Scott Clark, E. E. Doty, Dudley Hoyt, Melvin Sykes and W. G. Thuss. A committee composed of Schanz, Cusick, Rentschler and Professor Silverberg (artist, Pittsburgh) selected the pictures worthy of special mention, after which another committee, composed of Ryland W. Phillips, chairman; Chas. L. Lewis, and C. R. Reeves, picked the winners from those first selected. This method met with the unqualified approval of all and assured every one a "square deal," and to further enhance the value of the judges' decisions, Mr. Phillips was chosen to give a constructive analysis of the picture exhibit. This was a both timely and able discourse, and is what has been needed for many years, as every one is intensely interested in what really constitutes a great picture, and in knowing why one certain picture was selected for honors and why another was not. Mr. Phillips showed the actual pictures before the audience and constructively criticized them. He said: "Pictures should carry and hold the attention from a distance—they should be bold in composition and show perspective and atmosphere—backgrounds are needed mainly to give relief, and solid black or white grounds should not be tolerated—the picture should tell the story in treatment as well as theme—draperies should be in proper proportion and not give too great a mass or body to the picture, they should show form without being vulgar—one should strive to express more of poetic thought in pictures."

Some of the exhibitors, not prize-winners, were as follows: Frank A. Bill, Cleveland; Frank Moore, Cleveland; J. H. Brubaker, Grand Rapids; Dozer Studio, Bucyrus; H. E. Welsh, Cleveland; A. O. Titus, Buffalo; Lee Bell, Pensacola, Fla.; Knaffle Bros., Knoxville; A. L. Bowersox, Cleveland; J. H. Field, Fayetteville, Ark.; W. O. Brecken, Pittsburgh; Merle Boyer, Cleveland; H. E. Welsh, Oberlin, Ohio; The Crosbys, Youngstown, Ohio; S. Gordon, Chicago; The Kossuth Studio, Wheeling, W. Va.; L. F. Bachrach, Boston, Mass.; Arnold Studio, Montclair, N. J.; Peck's Studio, Akron, Ohio; L. E. Crandall, Washington, D. C. As will be noted by the above, the exhibit was fairly representative. Some enlargements were shown, and a small collection of autochromes. Very few pictures of a commercial nature were exhibited, but some very fine landscapes were displayed, a number being from the John Wanamaker Exhibit. Portrait-photographers are beginning to see the value and inspiration to be gotten from outdoor work with the camera, and it is to be hoped that more will show landscapes in the future. Very few women exhibited, although not a few belong to the associations; probably this was due to the fact that no special provision as to prizes was made for the auxiliary.

The work this year was varied and showed individuality, and very little striving after style. Considerable soft-focus work was on display, but the sharp focus is still in the lead. Photographers are beginning to take more interest in decorative work and to put more of poetry into their work for exhibition-purposes. Worked-in grounds were more moderate, and but few pictures were shown with solid black or white grounds. Sepias and black-and-white effects were about equal, and not many border-designs or double-printing effects. The picture-space in most of the pictures was well filled. Children-subjects predominated. Interest in hand-work and sketch-work seems to be declining.

The women present organized the O. M. I. Trailers — an association of the wives, daughters and sweet-hearts of the photographers of the O. M. I. Dues and initiation were fixed at 25 cents, but will be raised to 50 cents (presumably "on account of the war"). Mrs. Rush gave in the report, and she was heartily applauded for her efforts on behalf of the social side of the mere male members.

Among the notables in attendance were Professor Silverberg (artist), Pittsburgh, Pa.; G. Hammer Croughton, Rochester, N. Y.; Goodlander Sisters, Muncie, Ind.; Gerhard Sisters, St. Louis, Mo.; J. S. Schneider, Columbus, Ohio; C. R. Reeves, Anderson, Ind.; Ed. Perry, Fort Wayne, Ind.; C. E. Smith, Evanston, Ill.; Melvin Sykes, Chicago; E. C. Pratt, Aurora, Ill.; J. L. Cusick, Louisville, Ky.; L. A. Dozer, Bueyrus, Ohio; Ben Larrimer, Marion, Ind.; E. E. Doty, Battle Creek, Mich.; Ryland W. Phillips, Philadelphia, Pa.; C. L. Lewis, Toledo, Ohio; Howard D. Beach, Buffalo, N. Y.; G. L. Hostetler, Des Moines, Iowa; John I. Hoffman, Washington, D. C.; C. A. Shubart, Princeton, Ind.; Felix Schanz, Fort Wayne, Ind.; W. S. Lively, McMinnville, Tenn.; L. H. Bissell, Effingham, Ill.; Otto Sellers, Muncie, Ind.; W. H. Littleton, Muncie, Ind.; D. D. Spellman, Detroit, Mich.; J. A. Bill, Cincinnati, Ohio; O. L. DeVinney, Port Huron, Mich.

The Photographic Press was represented by J. C. Abel, *Abel's Weekly*, Cleveland; Frank V. Chambers, *The Camera*, Philadelphia; David J. Cook, *Photo-Era*, Effingham, Ill.

The Resolution Committee brought in a report thanking the Photographic Press, Cedar Point Management and officers of the Ohio-Michigan and the Indiana Associations. They also passed resolutions of respect for Thomas Palethorp, Greenville, Mich., member of the O. M. Association and charter member of the P. A. of A., who passed away during the year.

Ryland W. Phillips reported for the committee on the Cramer Memorial Fund, and stated that the fund, amounting to \$1,500, would be placed to the credit of the Hospital and Clinic Department of the Altemheim Home for Aged People, at St. Louis, Mo. This home is one in which "Papa" Cramer was most interested during life and to which he left certain funds to help in its maintenance after his death. Suitable tablets will be erected to show for all time what the Photographers of America have done in "Papa" Cramer's memory. The tablets will be at the entrance to the hospital and on the doors of the rooms set aside commemorating his memory.

The American Congress of Photography

At the conclusion of the Ohio-Michigan-Indiana Photographers' Associations convention, at Cedar Point, Ohio, the American Congress of Photography met to outline the work to be taken up by the P. A. of A. for the coming year. Vital matters pertaining to the good of the association were discussed, which will

be placed before the membership in due time through the pages of the *Association News*, after they are placed in proper form for intelligent consideration. The Amalgamated Associations of the national body will probably be asked at the next national convention to defray the expenses of those delegates in attendance.

The matter of closer coöperation between the photographic schools and the P. A. of A. was discussed at length and the following resolution passed:

THE RECOGNITION OF PHOTO-SCHOOLS

To Whom It May Concern,

Whereas the Photographic profession would be greatly served by a close co-operation between the P.A. of A. and the Photographic Schools —

And whereas there has not been any co-operation of this nature in the past —

Be it resolved that any photographic school which shall confine its diplomas to those students who shall specialize in one of the different departments of studio-work, such as operating, printing or retouching, and who shall have pursued a course of not less than six (6) months' duration for each course in which he specializes and for which the diploma is granted, said schools shall be rated as accredited institutions by the P.A. of A.

Be it further resolved that the executive board of the P.A. of A. shall be empowered to issue letters of credit to schools which comply with the above requirements, and also be empowered to withdraw such letters of credit when such schools fail to comply with the requirements upon the compliance of which the letters were granted.

In addition, resolutions were passed that, should the Government place a tax on photographs, a committee be appointed to see that the amateur pay his share. Resolutions were passed also commending the officers of the Ohio-Michigan-Indiana Association for bringing about such a successful meeting.

The resignation of Mr. Jno. I. Hoffman, the secretary, was read. He is to take up the duties of assistant secretary of the International Association of Rotary Clubs, with offices at Chicago. He commences his new duties September 1, 1917. Mr. Charles Columbus, secretary of Retail Merchants' Association, Washington, D. C., was introduced, and will doubtless be engaged to take Mr. Hoffman's place.

Mr. Dozer, a former president, was presented with a life-membership by Mr. Charles Lewis on behalf of the association.

Members were present from Ohio, Indiana, Michigan, Wisconsin, Pennsylvania, New York, Arkansas, West Virginia and Illinois.

The secretary stated that over \$4,000.00 stood to the credit of the association, and that about 2,200 members had paid their dues for 1917. About eighteen hundred cards were sent out relative to increasing the dues; 268 were returned. Of these, 129 voted for \$5.00; 31 for \$4.00; 57 for \$3.00, and 53 for no increase.

It was stated that a member of the P. A. of A. now held membership in the Copyrights League, as the association had assumed the obligations of this society. Article six, section six, of the constitution was amended so that a committee of three will now be appointed on the copyright matters of the association. The secretary stated that \$1,235.00 was received from manufacturers and dealers for exhibition-space. All officers of the P. A. of A. were present. Six prints were selected for Salon-Honors in the association's exhibit, which comprised 188 pictures.

Manufacturers' Exhibits

The manufacturers' exhibits were varied and large, most of them would be a credit to any national convention, especially those of the Eastman Kodak Co., the Ansco Co., G. Cramer Dry-Plate Co., Hammer Dry-Plate Co., Central Dry-Plate Co., Sprague-Hathaway Co., H. Lieber Co., Wollensak Optical Co., Haloid Co., A. M. Collins Co., etc.

Every inch of space available inside the hall was sold, and exhibits were crowded out as well as space at the entrance to the hall.

Not anything was shown, differing greatly from former exhibits, and nothing particularly new, although the manner of display was varied and novel. The Eastman Kodak Company had a representative exhibit by leading photographers, who, throughout their entire display, showed their originality and individuality. Each man's work was selected by himself, and was a finished exhibit expressing his taste entirely, the display being his own work alone—from making the negative to framing the print. This was an education, in itself, equal to a visit to the studios of the different photographers represented, because it was wholly their idea that was expressed and not those of the Eastman Kodak Company.

The features that characterized the Ansco exhibit were the pictures of Hillers and Dr. Arnold Genthe, of New York City. The latter display was of the superb quality for which Dr. Genthe is noted. Mr. Hillers' work was extremely unusual and caused much discussion. In tone, feeling and effect it had an individuality all its own, and the only comparison would be the works of Whistler. The Ansco exhibit was one of the best attractions, and contained, besides the art-exhibit, their full line of professional apparatus—Enlarging Camera, New York Portrait-Camera, Professional Printer, etc., and the new "Break Back Hinge Back" for the Enlarging-Camera, enabling one to place the paper on the board in a horizontal position.

The Cramer Dry-Plate Co. showed many beautiful backed transparencies, enlarged from small films, the work of J. W. Beattie. A very fine exhibit was also shown from the studios of Strauss-Peyton, Kansas City. These were also out of the ordinary, the work having the effect of being made by a naked artificial light, throwing strong shadows, and being relieved with soft diffused daylight. The whole produced a weird oriental effect. The Hammer Dry-Plate Company showed some special colored Dorotypes which were quite popular, judging from the number that were shown in several of the exhibits. Fowler & Slater brought out a showcase card along the lines of the card spread broadcast by the Eastman Kodak Co. last year. It read as follows: "LOYALTY—First to your Country—Then to your Home—To Cheer—Those at Home whose Hearts are with you—Leave—Your Photograph." Sprague-Hathaway Co. showed free-hand oil-paintings over photographs, which were very distinctive and in good taste, and very different from the usual rubbed-in oil-coloring. They also made a hit with their coloring of amateur landscape-prints, which were shown from mere tinting to full, free-hand coloring. This is a hint to the professional to get busy, and not only to make enlargements from amateur negatives, but to go a step further and to sell colored work worthy a place on the walls of any home of refinement. To continue further descriptions of other exhibits would be but to repeat. All were fine and showed that the manufacturers were thoroughly alive to the times and the needs of the profession.

The souvenirs were not plentiful, but were neat and very acceptable. The Eastman Kodak Co. gave a very nice watch-fob, the bronze tablet bearing their trademark. The Ansco Co. gave pencils and holder, the button bearing the American Flag. They also distributed balloons bearing their advertisement. The Wollensak Co. gave away color-filter novelties. The Haloid Co. passed out pencils to their friends, and suggested that they try the new Cameo Paper for Sepias. The Central Dry-Plate Co. gave away their now famous

"Bullets" (pencils)—harmless except that in shooting to shoot with Centrals.

The manufacturers and dealers, and their representatives, follow in alphabetical order: The Ansco Co.—W. A. Rockwood, R. Stafford, O. Rye, A. H. Hansen, R. W. Madlener, Blome Bros. Co., Detroit, Mich.—Fred Blome, C. A. Dion—picture-frames, California Card Mfg. Co.—M. M. Frey—regular line of card-stock. Central Dry-Plate Co.—F. E. Cramer, Mrs. F. E. Cramer, A. W. Moody, Mrs. A. W. Moody—black and white transparencies, and negatives showing superior quality of Central plates. The proof was shown in the large and excellent display of prints hung on the walls. The Chilcote-Sargent Co., Cleveland—F. J. Fugent, F. D. Warner, A. H. Chilcote—fine and complete line of mountings. Colgrove Bros., Buffalo—H. M. Colgrove—showing color-work for photographers, in watercolor and oil. Their colored Dorotypes, backed up with colored silks, deserve special mention. A. M. Collins Co.—Roll R. Jones, J. Evans, M. A. T. Gillbee—featuring Persian Velumet (like leather), something approaching leather-mountings. This adds a tone and style to any photograph, and will aid materially the photographer to receive the highest prices for his work. G. Cramer Dry-Plate Co.—G. A. Cramer, J. J. Sheets, H. F. Brown, J. W. Beattie. This exhibit was replete with the finest work of some of the best workers in the country, and showed the high esteem in which these plates are held. The negatives and transparencies showed the full range of light-action, in delicacy of tone and boldness of definition. The exhibit was the regulation national display. Eastman Kodak Co.—Harry Fell, R. W. Barbeau, Harry B. Willis, N. P. Richardson, William Sheets, Ed. Campbell, Ed. Countryman, DeForrest Stamp, Frank L. Andrews, Frank Emmenger, Jack Gunderson, Arthur Paul, L. E. Snyder, Chas. Hutchinson, Chas. Burley, Frank Hickok, Al. Larimer. This exhibit, besides containing the excellent display of art-photographs spoken of heretofore, contained all the film-negatives made at the flashlight demonstration by Mr. Poynter. They did not show manipulation of any kind, and were certainly a prize-lot, and were convincing arguments for Eastman Portrait-Films for home-portraiture. Fowler & Slater, Cleveland—A. C. Gorsuch, Jake Landis, E. C. Crosier, Phil. R. Slater—showing Poynter Flash-Apparatus, Campbell vignettes for home-portrait cameras, selling at \$2.75 to \$3.50, and Norton Baby-Holder to fold up for home portrait work, Windsor & Newton Retouching-Dope, which can be used a second or third time over the first retouching. This is something the photographic profession has long wanted, and this preparation, coming from such a strong house as Windsor & Newton, must surely supply the need. The Gross Photo-Supply Co., Toledo—W. I. Gross, O. Gross, R. Gross—complete line of card-stock. The Haloid Co.—F. W. Godfrey, Ed. Arthur, Ed. Yauck, chemist, and J. R. Wilson, sec'y. The new "Cameo" paper (especially for sepias) was shown, demonstrating that a paper combining brilliancy and softness with ease of handling and surety of results can be made to meet this need in sepia-work. This was the best exhibit made to date by this firm. Hammer Dry-Plate Co.—F. S. Sloan, C. O. Towles, Geo. Eppert. The firm's regular national display was shown, nothing being too good for the O. M. I. The "boys" appreciated this, as was shown by the large gathering constantly viewing the exhibits and visiting with representatives. The pictures were, in fact, a little above the usual art-exhibit. L. M. Johnson, Chicago, Ill.—P. C. Liggett—hand-carved frames, in "period" designs, as Roman, Queen Anne, William and Mary, and

Grecian, in antique, gold and other finishes. The Kroner Photo. Print-Dryer Co., St. Louis—Mrs. E. A. Kroner—drying-machines capable of drying 550 prints per hour. The H. Lieber Co., Indianapolis—Robert Lieber, Edward Beichler, W. Houseman, Max Buehler—only high-art, hand-carved frames for the high-class trade. A large and attractive line was displayed. McIntyre Photo. Printer Co., So. Bend, Ind.—H. H. McIntyre. Mr. McIntyre was kept busy showing the superior advantages of his new electric synchronizing clock-timing device, which regulates the strength of the light and assures correct and uniform time given to all prints, under all conditions of voltage. The Medick-Barrows Co., Columbus—F. C. Medick, S. B. Fox—special corner folders, and mountings of character. Presto Mfg. Co., Pittsburgh—S. S. Loeb, Leon Loeb, Joseph Loeb—photographs showing the many and varied uses of the "Infallible" masks were displayed to advantage. The Shoberg Co., Sioux City, Iowa—D. C. Shoberg. The new improved and original Portable Skylight was the principal attraction in this booth, and the fine large photographs hung on the walls were proof of the superior nature of this machine. Sprague-Hathaway Co., West Somerville, Mass.—Jewel S. Jewell—hand-modeled frames of distinction for the particular photographer; oil-paintings; miniatures on ivory; water-colors; in fact, everything that the most fastidious photographer would want, in the way of colored pictures, both in miniature and enlargements. Stanley Bros., Grand Rapids—C. A. Stanley, Jack Stanley. These background painters were as popular as ever, and as in former years showed something new in backgrounds; this was the three leaf ground, containing six paintings, in color; any one of the set could be used alone or the three on one side of the screen formed a setting for a group. Sweet, Wallach & Co.—H. C. Sievers (president), G. N. Odele, S. R. Oswald, C. B. Woidt. This large photo-supply house was well represented and showed many specialties. Among those worthy of mention were E. K. Co. cameras, Northern Lights, Parallax Reflector, Wratten Safe-Light and Simplex Auto. Print-Dryer (electrical). They were a busy bunch in the Sweet, Wallach booth, and it took all the boys to wait on all their old customers. Tapprell Loomis & Co.—J. A. Cameron, M. E. Sholl, W. L. Harris. Leather cases for Doro-types and soldiers' pocket-cases for photographs were the leaders in this popular line this year. The F. W. Wolf Co., Cleveland—Chas. Leeland, G. P. Bard—line of card-mounts which were much admired. Wollensak Optical Co.—J. A. Dawes. Mr. Dawes was all alone this year, but showed himself thoroughly capable of caring for the men, and women, too, friends of the Wollensak products. If any one, perchance, did not smile at Dawes, he speedily changed his face upon looking at the little souvenir he passed out—a little trick with filters, hinting what one could expect upon becoming an owner of a Wollensak. The F. Zimmerman Co.—Chas. C. Houser—a complete line of mouldings and picture-frames.

The John Wanamaker Exhibition

THE Third popular Exhibition of Photographs will be held in the John Wanamaker Store, Philadelphia, November 1 to 17, 1917. Entries close October 13, 1917. The first prize will be \$25 in cash; the second, \$15, and the third, \$10. In addition, there will be ten prizes of \$3 each, besides honorable mention for as many pictures as the judges find worthy. This exhibition is for beginners.

The Thirtieth Annual Exhibition of Photographs will be held March 4 to 16, 1918, in Philadelphia.

Entries close February 9, 1918. The judges will decide the merit of each picture as they would in an exhibition of paintings or sculptures, and will have authority to hang only those pictures that are worthy, omitting all others. Eighteen prizes will be awarded, and as many "Special Mentions" as may please the judges.

First Prize	\$100
Second Prize	50
Third Prize	25
Five Prizes, \$10 each	50
Ten Prizes, \$5 each	50

In case of several pictures being of nearly equal merit, the judges may combine the prizes and divide them in different proportions, according to their judgment of the relative merits of the pictures.

Workers are cautioned to remember that there are two distinct exhibitions: (1) the Popular Exhibition in November, for *beginners* in the art of photography; and (2) the Exhibition in March for *advanced camera-workers*. Further information with regard to both exhibitions, and the rules governing each, may be obtained on application to the Photographic Exhibition Bureau, Street Floor, Juniper Street, John Wanamaker, Philadelphia.

Our Illustrations

(Continued from page 154)

luck with boy-scouts, but reaped only disappointment. Now comes Martha Curry, a pictorial worker with imagination, and ability to carry through successfully a preconceived idea. The limited capacity of a backyard suited her purpose, so she arranged the familiar ceremony of saluting the flag. Her means were modest enough—a small squad of patriotic little boys playing soldiers, including a trumpeter and a flag-bearer. The latter is the principal figure, and with true artistic perception the artist makes him balance the entire group of soldier-boys. The scene affords as inspiring a sight as if the participants were real soldiers. The arrangement, lighting and ensemble are truly admirable. Data: June, 1917, 11 A.M.; bright sunlight; Auto Graflex ($2\frac{1}{4} \times 3\frac{1}{4}$); 4-inch Cooke, at F/5.6; $\frac{1}{50}$ second; Wellington Anti-Screen; pyro in tank; Wellington formula; print on Enlarging Cyko; developed with Duratol.

To group a number of children around the mother, in an ordinary room, allot them one common interest and produce as satisfactory a result as has been achieved by Lena M. Tewkesbury, page 147, is no small task. The lighting is remarkably good, and the play of light and shade on the dresses adds to the character and interest of the picture. Despite the genre quality of the group, the faces should pass as excellent portraits. It is altogether a highly creditable piece of work. Data: March, 10.30 A.M. (made in Florida); bright light outside; 5 x 7 view-camera; 7-inch Wollensak lens; stop, F/4.5; $\frac{1}{5}$ second; 5 x 7 Seed 50; pyro; direct print on Artura Iris C.

Dr. Gray's landscape, page 149, shows good knowledge of photographic technique. The view is pleasing, by the absence of hackneyed design and by the careful and uniformly flawless workmanship. Data: June, 1917; bright sunlight; Standard Orthonon; pyro-metol (Ingento); Bausch & Lomb Plastigmat; stop, U. S. 32; $\frac{1}{2}$ second; B. & J. 3-time ray-filter; print on Cyko Plat.

The picture generously offered for general criticism, page 152, is by F. A. Hasse. Data: June, 4 P.M.; bright sunlight; $2\frac{1}{2} \times 3\frac{1}{2}$ Ica; 4-inch Carl Zeiss; stop, F/8; no color-screen; $\frac{1}{25}$ second; Eastman film; pyro, tank; enlarged print.



LONDON LETTER



It is good news that the London Salon of Photography is to hold its usual exhibition at the gallery of the Royal Society of Painters in Watercolors, 5A, Pall Mall East. The date fixed for the opening is the fifteenth of September, the private view being on Friday the fourteenth of September. The latest date for receiving exhibits at the gallery is the fourth of September. The show will remain open until the middle of October. It would have been a pity if the continuity of the Salon exhibitions had been broken, as so far during the war they have proved remarkably successful; and as most exhibitors give part, and in some cases all, of the proceeds from the sale of their pictures to the British Red Cross Society, the sum handed over yearly has been considerable, and the Salon Committee has the comfortable feeling that it is helping in the good work to meet the urgent needs of the wounded, as well as to keep the flag of pictorial photography flying. But to keep the flag of pictorial photography flying becomes increasingly difficult as the war progresses. Month by month the whole nation gets more closely drawn into the one absorbing business of the country, which is the war. It permeates each individual of every class, and no wonder that, except on rare holidays, photographers, amongst the rest of the population, cannot settle down to pre-war preoccupations. All the more, then, the Salon Committee is to be congratulated on continuing courageously the exhibitions and, what is more, making successes of them in such circumstances.

The Royal Photographic Society has decided not to hold its annual exhibition this year in the gallery of the Royal Society of British Artists, in Suffolk Street, as it has done for several years past, but to substitute for it an exhibition at the Society's house in Russell Square. This will be open for several weeks during October and November, and will be free to the public. The engrossment of both scientific and pictorial photographers on war-work, and problems of labor and finance, are the chief reasons for this departure. One cannot but regret that it has been found necessary to suspend the usual exhibition. Last year was the sixty-first annual show held by the society, and it has always been a popular fixture with photographers, as it embraced all branches of photography. No doubt, the serious scientific sections have been the most valuable, and the pictorial the weakest; but it must never be forgotten that the London Salon sprang originally from the "Royal," so that the latter is certainly the father of pictorial photography, although it is true that he drove his most promising children into revolt, and ultimately into secession.

At the last meeting of the Salon Committee, two new members were elected, viz., the Earl of Carnarvon, and Mr. E. H. Weston, of California. Mr. Weston's work is well known on this side of the water, as he has been a regular exhibitor at the Salon, and his "Dancing Nude," in last year's show, is still fresh in our memory.

The exhibition of Mr. Angus Basil's "Portraits and Figure-Studies," at the Camera Club (Adelphi), which opened just after our last letter was posted, has proved an exceedingly interesting show. The prints are all made in one uniform process, probably enlargements, but the artist seems to have made a big effort to show variety of subject. First, we have a set of ordinary portraits, big heads that call for no particular mention, and are not very striking or interesting. Then there is a group comprising as models a small boy, a naval officer, a young man rather taken up with his

finger-nails, and an old man's profile. But the most striking pictures are those of more or less draped, or more or less nude, feminine figures. In these, Mr. Basil has attempted to express various frames of mind by attitude and expression. Some of the results strike us as somewhat forced and, consequently, unconvincing. Perhaps the entangling draperies were too unusual to allow the mind to concentrate on the various ideas intended, of which we should not have got an inkling but for the catalog. But photography is no doubt a hard master, and will not respond always to our exalted thoughts, or coöperate in their graphic expression. Mr. Basil's work seems influenced rather banefully by the cult of the ugly and the strong; but for all that this is a show that is well worth seeing, and which gives one enough to think about. There is a brain behind it, and for that one can forgive much.

Babies, babies, babies, that's what it is this week, and probably every camera in the place is out photographing babies. The first week in July is Baby-Week in London, and is dedicated to a great campaign for saving the babies of the nation. We had been specially invited to an Infancy Welfare Fête yesterday, because it was thought an exhibition of baby-photographs would be sure to interest us. And so it did; and amuse us very much, too. Here were all the fifty candidates for a baby-competition, printed in velox, half-plate size. The tent in which this little side-show of the fête was held was very empty, and we are afraid that not many pennies (the entrance-fee!) went to swell the fund, for people imagined that photographs of babies, all under eighteen months, would be exactly alike. We, however, having photographed a good many babies ourselves, were wiser, and were prepared for what we found, viz., every snapshot an original in its way. One could see at a glance that Baby Smith was a tiresome little boy rascal, who stoutly refused to let his mother take her not very elegant string-bag out of his hand when he was "took;" and that Baby Jones, with her head on one side and a chuckling smile on her face, was not at all displeased at the attention.

Ward Muir, of photographic fame, who started and ran that very unique and amusing *Gazette* of the 3rd London Hospital, has now published what he calls "Our Latest Audacity." It is a book called "Happy though Wounded," and is a collection of all the best things that have been published in the *Gazette*. As Lance-Corporal Ward Muir says, "Though the reading-matter will keep you interested, and generally chuckling, it is the pictures that are our proud boast;" and when one remembers that it contains the cream of Lorimer's, Irving's, and Dowd's drawings, the De la Bere cartoons, and some of Nevinson's work (also as this is a photographic letter), some of Ward Muir's photographs, and that all these were workers in the hospital, it should prove as great a success as the *Gazette*. Its price is 2/6, and all profits go towards the Comfort Fund of the Hospital.

The Lyceum Club had a photographic function and we spent an interesting afternoon seeing old friends and viewing the work of some of the members. Our invitation card said "an exhibition of Pictorial and Press Photography," and it was an excellent idea to combine the two; for when one felt a little tired of the journalistic section, with its momentary interest, one could refresh one's self by enjoying some of the pictorial work, some of the best and most satisfying of which were landscapes by Mrs. Kinder. The Lyceum Gallery was filled with folk, but it was not quite the same as in pre-war days, when one of the present writers was a member, and we missed many of the well-known photographic lights, who are now engaged more seriously.

CARINE AND WILL CADBY.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

JAPANESE FLOWER-ARRANGEMENT (Ike-Bana). By Mary Averill (Kwshinsai Kiyokumei). Small quarto. Cloth, Japanese style. 88 illustrations. Price, \$1.50 net; postage extra. New York: John Lane Company; London: John Lane The Bodley Head; Toronto: Bell and Cockburn.

It may be interesting to note that the issue containing an essay on Japanese pictorial photography (by Charles Hovey Pepper) should be succeeded immediately by one with a review of a work on the Japanese art of arranging flowers in a decorative way. Although artistic and poetically expressive photographic studies of flowers have been published in these pages — notably by George Alexander, Fannie T. Cassidy and W. S. Davis — they represent the study of the principles of composition of European origin. There is no evidence of the influence of Japanese art. According to the author of *Ike-Bana*, the Japanese follow the art of flower-arrangement from their youth, and this has given them an idea of proportion, taught them the power of concentration and, one might almost say, imbued them with many of their finest traits of character. The author lays stress upon the pleasure and benefit she derived from long study of Koshin-Ryu, a particularly simple and natural school of flower arrangement. "Not only in the grace and beauty of the lines achieved and in the strengthening in sense of proportion, but in the quickening of observation of the natural growth of all plants and trees, I have gained so much that it makes me long to pass on to others what I have found so helpful."

Ike-Bana, the Japanese word for flower-arrangement, means *living* flowers, and explains by its derivation the fundamental principles of the grouping. Without some knowledge of its history, it does not seem possible to get into the proper spirit to work out the true beauty of these arrangements; so in this entertaining and instructive volume is given a concise history of the different schools and their dates, as age counts for so much in Japan that the followers of the more modern schools are regarded with scorn by the adepts of the old schools. In *Ike-Bana*, the Japanese have given us a scientific arrangement of flowers which excels all others in beauty of line and brings into our homes the refreshment derived from growing plants — a quite different sensation from that given by other arrangements of cut flowers. The reader of this volume cannot but attain a simple yet beautiful arrangement of flowers, if he has felt the desire for something less confused in flower-arrangement than has been reached by Western peoples.

The illustrations deal with flowers, and branches of flowering and coniferous trees, arranged in standing and hanging receptacles; and, while designed for decorative purposes in and about the home, they offer delightful and unconventional themes for the pictorial photographer, who will learn quickly the art of composing flowers of various kinds after the manner of Japanese artists, who have begun already to exert a strong and abiding influence upon American art.

THROUGH THE YEAR WITH THOREAU — Sketches of Nature from the Writings of Henry D. Thoreau, With Corresponding Photographic Illustrations. By Herbert W. Gleason. Large octavo. Cloth, decorated. \$3.00, net. Boston and New York, U. S. A.: Houghton Mifflin Company, 1917.

It is very rare to find a writer of ability and charm who is his own illustrator, filling the latter capacity exceptionally well. This statement applies in an eminent degree to Herbert W. Gleason, the well-known lecturer and photographer, as author of a delightful book on Thoreau, the American philosopher and naturalist, which the author has illustrated with eighty original photographs of his own, all remarkable for felicity, excellence and accuracy. The present volume is an endeavor to go a step beyond Thoreau's sketches, and to reproduce, with the aid of photographs, some of the outdoor-scenes and natural phenomena in which he delighted and which he has so graphically described. The series of views is limited, of necessity; but a sufficient number are given to illustrate Thoreau's method of nature-study as well as to emphasize, anew, the accuracy and felicity of his nature-descriptions. No doubt this combination of verbal and pictorial description will stimulate a wider apprehension and a more vivid realization of the beautiful in Nature — thus continuing, in a measure, Thoreau's self-appointed mission.

The text consists of quotations chiefly from the *Journal*, preceded by a sketch of the philosopher's life and haunts. As a lover of Nature, finding supreme pleasure and solace in her infinite beauties and mysteries, and giving expression to his lofty susceptibilities and emotions, Thoreau endeared himself to such men as Emerson, Alcott and Channing, and has won a conspicuous place in the affections of truly religious men. Though accused of being but a dreamer, idling his time away roaming through woods and over fields, Thoreau had a profession, and this is his statement: "*My profession is to be always on the alert to find God in Nature, to know his lurking-places, to watch for and describe all the divine features which I can detect in Nature.*"

With respect to the photographs, they were made by Mr. Gleason with the sole purpose to obtain, in every case, as close correspondence as possible with Thoreau's description. Each of the eighty photographs are up to Mr. Gleason's high reputation as a photographer of natural scenery, covering the varied interest and beauty of Walden Pond (Thoreau's favorite haunt) and the surrounding country. The pictures represent Nature at every season throughout the entire year; hence the book consists of four divisions — Spring, Summer, Autumn and Winter, each with appropriate extracts from Thoreau's writings and the corresponding photographs by Mr. Gleason. There are pictures of woods, hills, fields, meadows and ponds; also pleasing nature-studies — flowers, shrubs, berries and birds, such as delighted the heart of the great nature-lover. Many of the landscapes are positively beautiful in subject and composition, several of which, through the courtesy of the publishers, will be republished in our next issue.

This book, a copy of which every photographer-naturalist should own, will tend to make Lake Walden — near Concord, Mass. — and its wooded shores more widely known and to attract visitors and camerists from afar. The locality, beloved of Thoreau, will continue to grow in the hearts of his admirers and followers, and be as worthy a visit as Concord and Lexington, each only a few miles distant from Boston. The beauty of Lake Walden can never be forgotten.



WITH THE TRADE



Plenty of Lumière Autochrom Plates on Hand

THOSE who are eager to photograph the marvelous colorings of autumn-foliage, or who wish to make studies of subjects in costume, or who wish to work with the famous Lumière Autochrom plates, may now obtain them promptly from R. J. Fitzsimons, 75 Fifth Avenue, New York City. A large and complete stock has been received, sufficient — according to Mr. Fitzsimons — to meet all reasonable requirements. Amateur and professional photographers should write at once for the latest descriptive matter which tells how to use, develop, mount and display Autochromes.

Photograph of Old Glory

OF the countless attempts to photograph the American Flag in an artistic and effective manner, very few indeed, are successful. It has remained for the Detroit Publishing Company to accomplish this difficult feat, as may be seen by a reproduction of our National emblem on page 156. The publishers inform us that the original print, measuring $14\frac{3}{4} \times 21$ inches, sells for 35 cents, and that it has proved a popular seller. The same picture in postcard size, and in natural colors, is a beauty, as can easily be imagined. Everybody should own a copy of this superb representation of our Flag.

The Passing of the P. A. of A.

THAT the Photographic Association of America faces a radical change in its future activities was manifested by an unanimous vote passed by the National Congress at its recent session at Cedar Point, Ohio — that, on account of the heavy financial burdens borne by the manufacturers and dealers, heretofore, in preparing and conducting exhibits at the national conventions, these exhibits be dispensed with, and that, whether this be done or not, the annual conventions of the P. A. of A. be superseded and represented by the Photographic Congress, delegates, with expenses paid, to be sent from the various Amalgamated Associations.

The matter of the permanent and paid secretary of the National Association was also discussed by Congress, and, as the amount paid that official for salary and expenses was not deemed commensurate with the results achieved, it was voted to accept the resignation of Secretary Hoffman, who will fill the position of assistant-secretary of the International Associations of Rotary Clubs, with offices at Chicago. Mr. Hoffman is succeeded by Charles J. Columbus, secretary of the Retail Merchants' Association of Washington, D. C., his salary to be determined at the next national convention. Every member of the P. A. of A. knows that the paid secretaryship was a question of experiment only. If it turned out that the expense justified its existence, it would be continued indefinitely; but if it proved otherwise, the office would be abolished. Therefore, the retirement of Secretary Hoffman is in no wise to be construed as a reflection upon his ability or character. As the Congress acts in the nature of an advisory rather than an executive body, having no authority to make changes in the National Association,

these, and many other interesting questions discussed at this meeting, are entirely in the nature of recommendations, and will come up for adoption or rejection at the next year's convention of the P. A. of A. It is therefore more than probable that, after its convention of 1918, the National Association will continue only as a legislative body and be truly national in character. Those special features, exhibits and demonstrations by the manufacturers, to whom they have been a heavy expense, with no particular benefit beyond publicity, will doubtless be discontinued. As to the National Salon, that is a problem that will be considered in the near future.

The Photographers' Association of New England

THE Photographers' Association of New England 1917 Convention is to be held at Infantry Hall, Providence, R. I., September 25, 26 and 27.

This convention is planned along practical lines. Some of the prominent features will be operating-demonstrations, making negatives under various conditions and using artificial light and daylight. Finished prints will be shown at the convention. An effort will be made to give practical darkroom and printing-room demonstrations from the negatives made at the convention. There will be talks on studio-system, reception-room work and the business side of the studio. An expert artist background-worker will give demonstrations. One of the foremost airbrush-workers will demonstrate and tell the possibilities of the airbrush as applied to the studio. Another novel departure, this year, will be several meetings of small group, of members to talk over studio-troubles and their remedy. We will hear short talks from various photographers — from some who are prominent and from others who wish to assist their brother-photographers by telling a bit of their own experience.

The prizes offered this year will consist of the handsome Champlain sterling-silver cup. Also the Wollensak Optical Company has offered one of their attractive cups to him who uses their lenses most successfully. Another feature, this year, is the departure from the former type of certificates of merit. No expense will be spared to obtain one of carefully selected artistic appearance which any photographer will feel proud to display in his reception-room. One of these certificates will be presented to each photographer who enters a display and who demonstrates a certain degree of excellence in his work.

The entertainment-feature of the program will consist of an automobile-trip in and around the beautiful city of Providence and a sail down the Providence River to Newport. After an inspection of this interesting social and naval center, a genuine Rhode Island clam bake will be served, and at its conclusion a trip will be taken around the harbor, then back to Providence. The banquet will be served as usual. Other attractions are assured, as the photographers and people of Providence are to welcome the association with open arms.

A. E. WHITNEY,
Secretary, P. A. N. E.

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No. 4

System in the Studio

PIRIE MACDONALD



SYSTEM is the orderly placing of things one after another, instead of letting things come up as they happen to occur, and I want you to bear that in mind.

System seems always to be applied in the minds of people only to one's business. But one may be systematic about the time to get up, for example. System in eating food is one of the things that photographers play fast and loose with. A man gets up and gets his breakfast because he happens to be there and breakfast is there. Sometimes at noon-time he does not eat his luncheon, and in an hour he commences to feel hungry, and people who come later do not get all that is coming to them. He can go at his work only in a half-hearted fashion. If he goes out then, he probably misses the man who did not come in at noon — thinking, of course, he was out to luncheon. Lots of times you can count on getting a bad picture because the man has gone without his luncheon to-day, and did have a big one yesterday, or none the day before, and he proceeds in this most unsystematic manner to put his digestive system out of order. If you do not arrange so that the studio is open at a certain time, your help will play fast and loose with you. If you do not have a certain time for the various important items of the day, and put the easy-dollar idea out of your head, you do not wind up with the money. There are people in this country who have a skylight as long as that side-wall over there, which they use only four times for making a group, and the rest of the time the other negatives are handicapped with that big light, just because they are unsystematic about things. If they could only realize that the system by which they would make single figures of people could be so much better served by a smaller light, adapted to the service, they could afford to get along without groups, on the principle that it does n't pay to waste energy over a 50-cent job and upset a \$125.00 day. A systematic arrangement of time

is very desirable in order that you handle yourself properly, but it is especially so with your help. For example, with many of you, if a sunny day does not happen to come along, it is day after to-morrow before you see your proofs. At 9.00 o'clock in the morning my electric-light-printed proofs are put on my desk. The retoucher is called in and the particular items that I think necessary are called to his attention, and it gives him a long day ahead of him. Ordinarily, the proofs are done in most studios any old time during the day, and it is absolutely impossible to say that your proofs will be done "day after to-morrow at 12.00; now when are you going to come to see them?" If the day is dark, and you print by daylight, you don't get them out. I strongly recommend that you get the idea firmly in your mind to have your proofs so that they can be considered by you at some *particular time* of the day. It takes the worry out of your mind, and the rest of your day is entirely free of them.

The Eight-Hour Day

Photographers are accustomed to get to work as early as they can and to leave when they can. I do not want anybody to get into my shop before 8.30; but at that time I expect the people to be there, and they are there. I feel that a good day's work on the part of the photographer ought to be on an eight-hour basis, and the result is that our shop is closed at 5.00, and if I find some one is always slow, and it is 5.15 before he gets out, I tell him if he has more work than he can do, and can prove it, that I will get him the help he is entitled to, and if he has not more work than he is entitled to, and he cannot get through by 5.00, I have to find some one who will. A while ago I found a man coming back at 9.00 o'clock at night, and I gave him a good call-down.

The only way to wake him up was to show him piece by piece that all during the day he was wasting time, merely because he had not started the day right. The reason I want people to get

through at 5.00 o'clock is because I want them good, bright, strong people. I want my people to be strong and healthy and well, and if your help are not strong and well and self-respecting, you do not get your dollar's worth. See that your employee does the thing the way you want it done. This is the way to keep help. Treat them right. When Christmas comes, and there is real business to be done, because you have worked systematically all year, you have your help in such condition that you can speed them up, and last Christmas there were only two evenings in the whole season when we worked after 5.00 o'clock, and one night only until 6.30 — two evenings in the entire year. Lots of fellows say that it can't be done; but it can be done, and I am doing it.

Finding the Time for Recreation

Men say that they can't get exercise in the morning, and they are through too late at night. The result is that they lose their "pep," and get soft. This is only because they have not *arranged* their time so that they *can* get exercise.

Three times a week I leave the studio at 4.30 in order to fence, and we fence for an hour or more, until my socks are wringing wet, and when I get my exercise and feel fit, I am willing to run the chance of losing a customer once in a while. But it is not waste, for I make good on those I do see.

It really means that you have got to sit down and arrange your day so that you do have time to do these various things in a decent and orderly manner. Mr. Strolmeyer talked about study, and while he was talking many of you men were saying, "It is all right for him to talk, but *I* do not have time;" but you *do* have the time.

Because I systematize my time, and the things are done when things ought to be done, I can leave the studio, and I never think of it again, because I know that the next morning, at certain times, certain things are going to be done whether I am there or not. That's why I am able to be here to-day.

Recreation I *have* to consider in this matter of system. Not having systematized, we are very apt to crowd recreation out, and after a while we get thoroughly tired and go away to the other extreme, and if we are addicted to the "red stuff," we get it bad. The principal reason that people are intemperate in photography is because they do not get recreation regularly and sanely.

Recreation is entitled to a place on your calendar as much as the hours for business-purposes. It belongs to you and don't you forget it!

Appointments

I told this story over in New York, and a good many thought that it had a fly in it, somewhere;

but twenty-four or twenty-five years ago I had been working desperately hard to get along in business, and it seemed as if it was just about there, but it did not come strong enough. Sitings would sometimes jog along, three a day, and the next day none, and the next day two, and I figured it out I was averaging only a couple of sittings a day (a great big husky like me, with two sittings a day!), so one morning I went into the shop (always having been a crank on appointments, because people value your time most if they ask for it) and I said, "Take that appointment-book and fill in all sorts of distinguished names in all kinds of ink, etc., and different writing, and fill in two solid weeks of it, and if anybody comes in, we are sorry, but we are too busy." I did the little things around the shop, and after a few days I went into the back room and sat down and had the best time I ever had in my life, not only because I had nothing to do and lots of time to do it in, but because I was fooling them. When I got through, there was a solid week of work ahead of me, and from that day on I have always had work. I got them started with the idea that I was busy, and people now think that I am always busy, and I sometimes am! But this idea of appointments works into system, and it is absolutely necessary. Commence making your sittings at a certain hour. This gives you a chance to get through with the things that you ought to get through with and make your sittings during certain hours of the day, and not after that.

Mapping Out the Work

At a convention one of the men was asked regarding his procedure under the light, how he always got his work exactly the same. He said, "Well, for one thing, I always use one stop. I never use the big stop in one case and small stop in another — it is confusing. I always use one stop." That applies all through the game. Always use one stop. Stick to one plate. It is like the one stop. After you have gotten an arrangement in your light where things have become uniform and systematic, and are working one after another with regularity, you will find that you have certain places in your room where you can do dead-sure things at any hour of the day. Have a certain spot in your room for certain work. Map out the floor of your room so that you will be dead-sure of every inch of it for some specific work.

I read once of a man who went into a photograph-gallery and dropped dead, and every time that a man comes into my place I have such a fear of his dropping dead that I always put him in one of the dead-sure spots where I know I have him. After that I am safe. I do that systemat-

ically. I do that without regard to whether I can make a better thing or not. I get in the sure sellers first, and then I do the fancy stunts.

I am trying to get you to put in somewhere in the studio some kind of artificial light that will give you a dead-sure thing at any certain hour every day you work. After that, turn out the light and turn on the daylight, and indulge all the activities you have the money to afford.

The Money-End of It

Now, when it comes to bookkeeping, it goes without saying that that has to be done by system. There are millions of systems of bookkeeping that have a practical end, and I do not propose to talk about them. It does not make a particle of difference what your system is; but bear in mind that it is of no use unless it is done regularly.

When we talk about money, it recalls to my mind a chap up in Albany. Bill did not have a great deal of money either, but I noticed that after a while he got so that he could buy things. I said to him one day, "Bill, how is it you seem so prosperous?" "Well," he said, "I systematically take out \$5.00 for the savings-account a day, whether I earn it or not." When he found that he was getting in the hole, he worked like the devil to get the money; for once it was put away, it was put away. For myself, I figured out this plan: that when I found that I had \$200 in the bank, and that my bills payable amounted to \$200, I reduced the amount of my bank-balance on the stub of the cheque-book by putting \$150 into red ink, and carried it out to the side of the column, and then made my footing in the black ink, which showed that I had only \$50. The red-ink totals were called the reserves, and the black-ink totals constituted active account. Of course, when I had taken off the \$150 I did n't have money enough to pay the bills, so I got out and hustled, for the bills had to be paid, and I did n't

let people owe me money so long that they forgot about it, and I pushed my sales up as far as I could and collected all the cash that I could, because I had to *pay those bills*, and I have always been able to pay my bills, and any bonds or real estate that I may happen to own at the moment have come from that little red-ink scheme, and we do it to-day. Of course I fooled myself, and some

of you would be better off if you fooled yourselves in the same way.

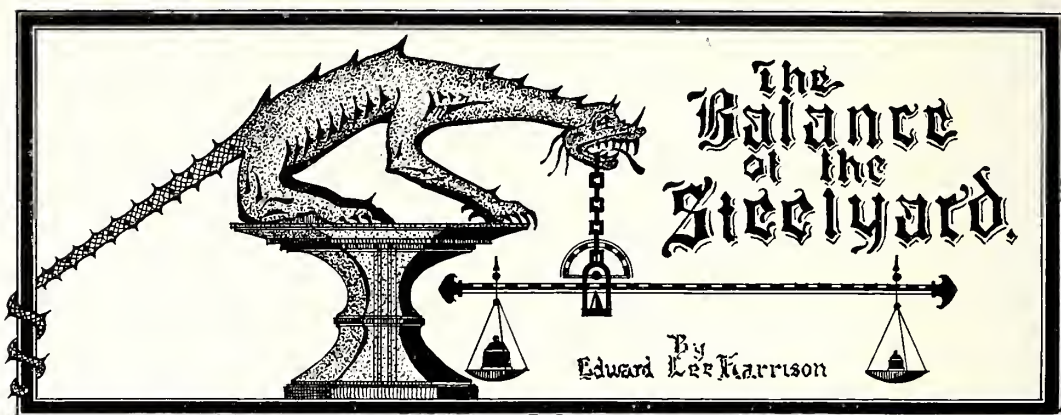
In photography, as in everything else at this moment, we are getting to a point that is most serious. We do not know, not any of us, what three months is going to bring forth. Some of you are going to do more and some of you much less than you ever did before, and bear in mind that the time you are not making money is the time to put your shop into shape, so that when you are making money it really does grow into the profit that belongs to you; and if you are making money now, in order to conserve that money you should so arrange your affairs that you will get a chance not only to make a profit, but to live like human beings and good Americans, and be able and willing

to pay your increased taxes.—*Address delivered before the Middle-Atlantic States Convention.*



PIRIE MACDONALD

ANENT the subject of specializing, for the professional, and dropping any diverting side-lines, Pirie MacDonald furnishes a good example. He is a man of many accomplishments — a forceful public speaker, a linguist and interested practically in military affairs. Despite the proficiency and enthusiasm with which he enters every activity, all diversions are excluded rigidly from his business, to which he is devoted ardently and successfully. In order to do the subject full justice, he has made his specialty portraiture of men and advertises himself as such.— W. A. F.



THE drawing-masters insist that composition is the foundation of all successful pictorial art. When asked the definition of the term they wax eloquent concerning scale, balance and unity. With their learned maxims ringing in his ears, the student fares forth to roam the field of art. After producing a few prospective masterpieces, and having them severely criticized, he digs up his note-book to see what is the matter. Sometimes he is able to unearth the difficulty, but more often he is not; yet we may safely wager that in most cases the difficulty lies with balancing. Of course, there are other serious defects to mar the picture; but somehow or other, none of them seems so universal and persistent as the lack of balance.

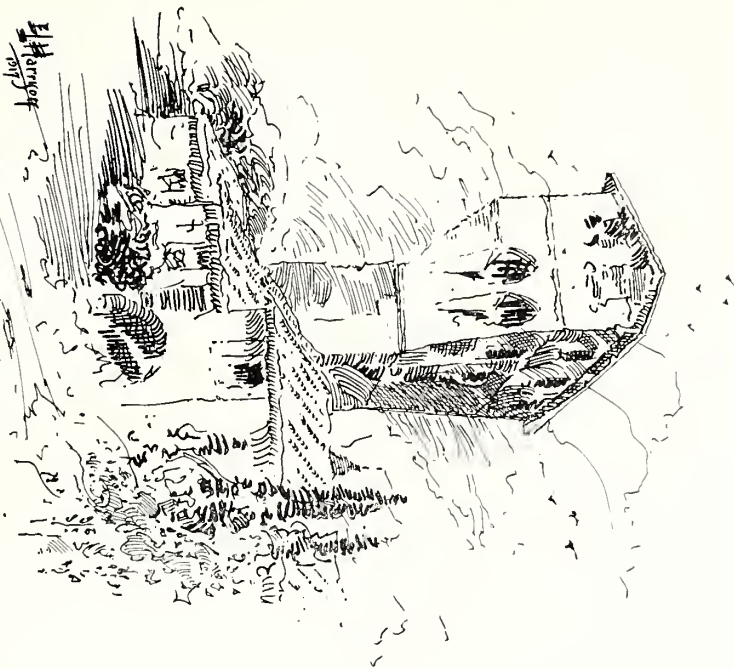
Volumes have been written concerning this essential element, but none of them is so simple and yet so effective as the rule of the common steelyard. Here are no elaborate rules, no complicated formulæ. A child may understand that the lighter weight on the steelyard requires a greater distance from the center of gravity than the heavier one. The advanced student will ask instantly whether the principle involved will apply to more than two objects in one composition. Here we must introduce another primary rule, which is so closely allied to the quality of balance as to be nearly inseparable. This is the rule of principality. The composition cries aloud for a principal object of interest, and will not be content nor in repose without it. Therefore, the answer to the question must be conditioned. The balance of the steelyard will apply to as many objects as may be necessary to form the composition; but there must be an object of principal interest, around which the other objects may be balanced carefully and pleasingly.

An analysis of any of the acknowledged masterpieces of painting or drawing will not fail to

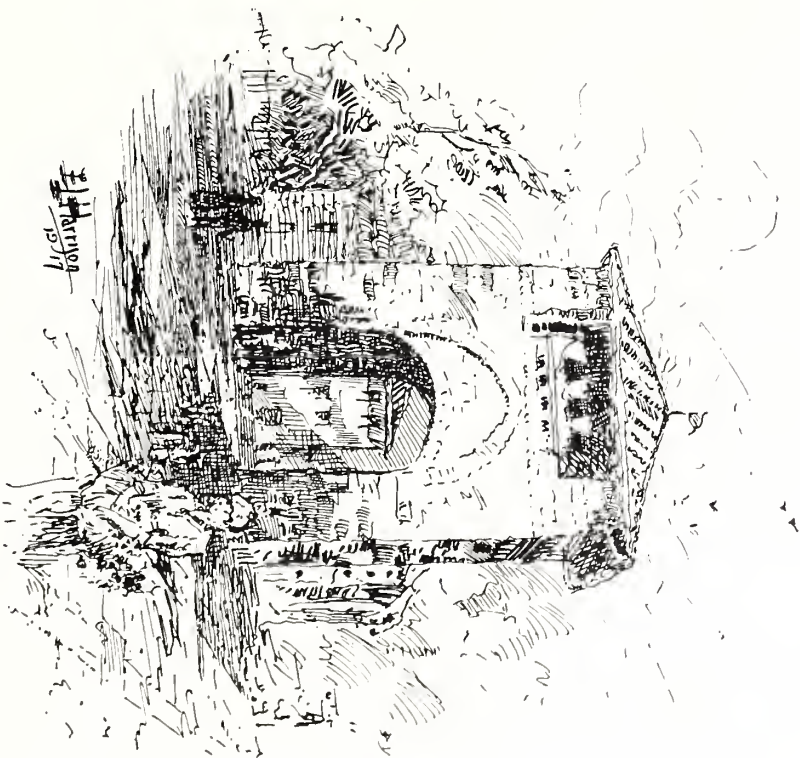
disclose the rule. Unquestionably, a study of these pictures with the principle constantly in mind is beneficial to the student, be he novice or professional. Some of the pictures will reveal at once the primary balancing of a few masses as, for instance, the Japanese work and some of the German compositions. Again, the grouping may be more elusive, as is the case when dealing with broken values; nevertheless, it may be seen if considered carefully.

Mention should be made here concerning the so-called elementary composition. Struck by the powerful yet beautiful efforts of some of the masters, dealing with two or three perfectly balanced and unified masses, the student straightway essays to produce similar masterpieces. And when some kind friend inquires sympathetically concerning the lonesomeness of the picture, he is indignant, and points out the source of his inspiration as convincing justification. And this brings us to the third link in the chain of balance-interest, which is very important.

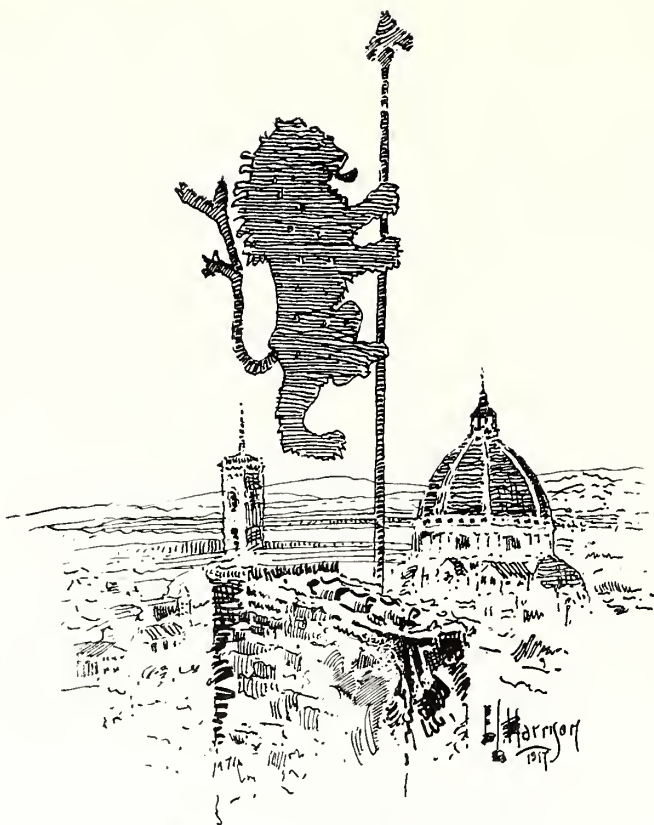
It is not sufficient that the picture possess poise and principality. Interest is also essential. The objects may be balanced neatly around the central axis, with due regard to principal and secondary masses, yet if the objects so balanced do not possess intrinsic interest and value in themselves, there can be no picture. Yet by this it must not be understood that there is not a composition. There may be a perfectly balanced set of masses, as in the case of certain decorative conventionals, but a composition is not necessarily a picture. There must be a purpose animating the whole — something which the mind takes delight to unravel. But the true artist will instinctively search out this quality. The pity of the whole matter lies in the fact that so many beautiful themes are ruined, so many sensitive spirits discouraged, by the lack of the simple, practical principle of the balance of the steelyard.



"Balance of the Steelyard"
The overbearing effect of the Tower
is held in check by the foliage on
the right of the picture.



"Balance of the Steelyard"
The balance of the picture is reformed
solely thru the agency of the figure
in the foreground



"Balance of the Steelyards."

Note how the close perspective of the light weather-vane enables it to hold in balance the mighty cathedral in the distance.

Tone-Rendering and Quality in Gaslight-Papers

T. D. TENNANT

IN a recent article on the tone-rendering capacity of gaslight-papers, Mr. James Thompson showed by an interesting set of diagrams the steps of gradation of various developing-papers. The tests made by a screen of superimposed sheets of onion-skin paper were for comparative purposes sufficiently accurate. The conclusions that Mr. Thompson draws from his measurements, however, do not seem to be entirely justified.

Mr. Thompson implies that the most satisfactory paper is the one which will render the greatest number of steps of his test-chart. If

his object in using a paper were to obtain a reproduction of his test-chart, this would be true. But the object of using printing-papers is to print, not test charts, but negatives, and what is required is (1) that the paper should reproduce all the tones occurring in the negative and (2) that it should reproduce these tones as accurately as possible. Let us consider these two points separately:

(1) Every photographer is aware that a printing-paper must be adapted to the negative used by adaptation, it being understood that a paper must be chosen which can render the whole scale of the negative. The scale of the negative

is simply the range of the light-intensities transmitted by it. In a very contrasty negative perhaps the blackest part will let through only $\frac{1}{100}$ of the light transmitted by the clearest portion. In a negative of medium contrast, the densest part will let through about $\frac{1}{20}$ of the light transmitted by the clearest portion, and in a very flat negative (one that has very little contrast) the densest part may let through as much as one-fifth of the light transmitted by the clearest portion. We should call these three scales, then, a scale of 1 to 100 for the very contrasty negative, 1 to 20 for the negative of medium contrast, 1 to 5 for the flat negative. In printing, we want the printing-paper to reverse the scale of light-intensities recorded by the negative, as nearly as possible, so that the blackest part of the negative will be the whitest part of the print and the clearest part of the negative will be a deep black in the print; in other words, if we wish the printing-paper to fit the negative we must select the grade so that when we print through the clearest part of the negative and just get the deepest black of which the paper is capable we shall also only just print through the densest part of the negative so as to slightly tint the paper.

The difference between the two units of exposure that will produce, in the one case a full black, and in the other case the faintest possible tint on a photographic printing-paper, is called the scale of the paper; for instance, with a given paper we may find that if we give one unit of exposure, we shall just get a visible tint, and that as we increase the exposure the blackness of the image on the paper will increase until, when we have given twenty units of exposure—that is, twenty times as much as we gave at first—the paper will develop up quite black and no further increase of exposure will make it any blacker. We should then say that the scale of that paper was 1 to 20, and the paper would fit a negative having a scale of 1 to 20. Suppose that we try to make a print on a paper having a scale of 1 to 20 from a negative that has a scale of only 1 to 5. We must time the printing so that the densest part of the negative is just printed through, because, if we underprint, all the tones will be too light and the print will lack detail, and if we overprint, the whole print will be too dark. In this case only five times as much light will pass through the thinnest part of the negative as will pass through the densest part of the negative. But the paper requires that twenty times as much light should pass through the thinnest part of the negative as passes through the densest part of the negative in order to give its deepest black in the shadows and only

a tint in the highlights, so that, instead of getting a whole scale of tones from white to black in the print, such a paper restricts us to a scale ranging from a white to a gray, the densest part of the low scale (1 to 5) negative being rendered white in the print, and the clearest part only gray, and not black.

If, on the other hand, we print from a negative having a scale of 1 to 20 on a paper that has a scale of only 1 to 5, then the whole scale of tones on the paper will represent only a quarter of the tones of the negative, so that either we shall have to represent all the higher densities of the negative as white paper or else we shall have all the lesser densities of the negative printing as solid black; that is to say, if we use a paper having a shorter scale than the negative, we must lose detail in either highlight or shadow; either out shadows will be "blocked up," as it is called, or else the highlights will be bare of detail; whereas if the paper has a longer scale than the negative, then we cannot get the full black out of the paper and the print will appear somewhat gray. The great importance, then, of selecting a paper to fit the negative is manifest.

We see, then, that a paper of very long scale, such as Artura, is suitable only for negatives having a long scale, and that a paper of short scale, such as Regular Velox, must be used for thin or soft negatives such as those to which the Velox paper is adapted. For each class of negative, in fact, there are papers which are suitable for reproducing all the tones occurring in the negative.

(2) Quality in a paper is not measured by the number of the steps of gradation. The requirement of quality is that *the steps of gradation should be as even as possible*. In Mr. Thompson's diagrams the steps of gradation are shown to be of the same length. While this gives the correct number of tones in a paper, it would imply that in practice these steps were of even length throughout the whole range of the papers.

If we measure the light reflected from the various densities of the paper that has been exposed under the gradation-screen, we shall get a series of reflection-densities which can be expressed in the form of a curve. This curve (Fig. 1) shows that the reflection-densities increase in less proportion at first than the densities of the gradation-screen through which the exposures were made. Then they increase in equal proportion with the screen, and finally fall off again and cease altogether when the deepest black of the paper is reached.

The quality of paper, as stated above, is dependent upon the evenness of the steps in the middle or straight line portion of the curve. The

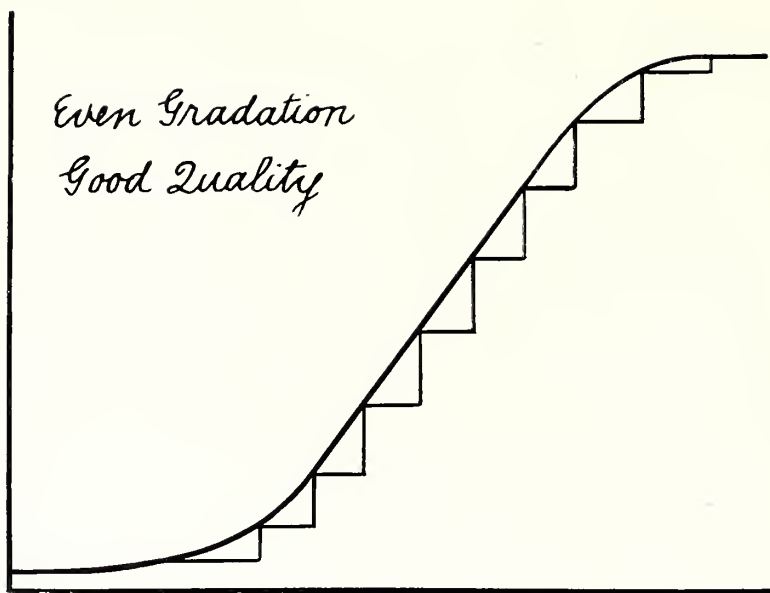


FIGURE 1

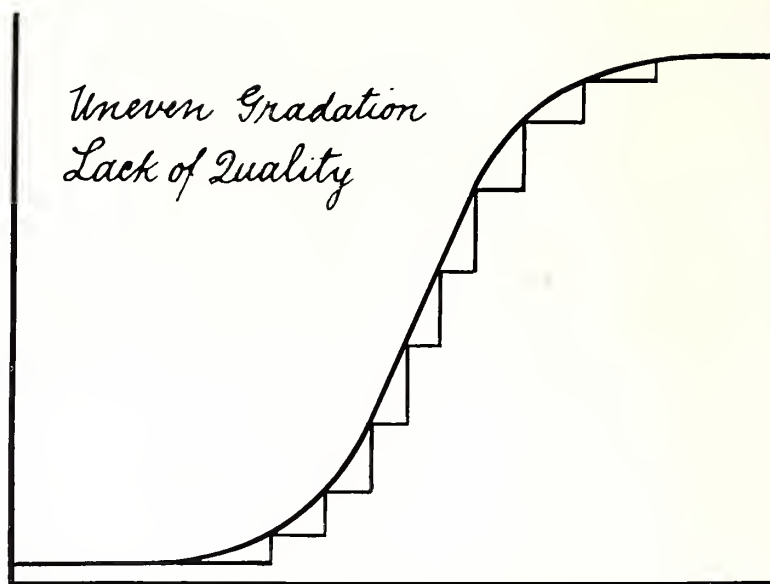


FIGURE 2

longer this straight line, the more of these even steps, then the more correct gradation or quality will we have in our print. It is quite possible, of course, to have two papers with an equal scale of tones to give an entirely different result. In one we have (as in Fig. 1) the few increasing and decreasing steps at either end and the long line of even steps in the middle. In the other (Fig. 2), with the same starting-point and making the same number of steps, the unevennesses, instead of occupying the smallest portion of the curve, take up the greater part of it, leaving only a straight-line portion where the steps are even.

If a correct rendering of a subject has to come on the straight-line portion of this curve, then the longer the straight line, the better chance it will have to reproduce the subject, and a paper

which has marked unevennesses at both ends of the scale will not produce a print of first-rate quality even though it have a full range of tones from black to white.

We see, then, that the conditions for making a successful print are (1) the scale of the paper must be chosen so that it will fit the negative, and (2) the gradation of the paper must be as even as possible between the extreme limits of its scale, and if these conditions are fulfilled then a paper with a short scale of even gradations printed on a short scale negative will give the best possible print, just as a print with a long scale of even gradation printed on a long scale negative will give the best possible print. So it is obvious that each paper plays an equally important part in producing the best results.

A Use for Old Bromide Paper

S. WATMOUGH WEBSTER

THERE are a few professionals who find themselves on occasion with a stock of bromide printing-paper on hand, which from one cause or another — light-struck, too old, etc., etc.—has been laid aside for the residue collector; but we have recently heard of a photographer who finds himself able to utilize it in his daily work — for printing rough proofs, which in a large business involves the expenditure of no inconsiderable amount of printing-out paper. Our readers would naturally say, upon reading this, that the saving is not worth the extra trouble of developing, etc.; but this we may say at once is not involved. The new plan is simply to make use of the old stock as a printing-out paper. The method of procedure is an ingenious adaptation of an old dodge with albumenized paper. Those of our readers who have been photographers long enough to have been graduated in printing on albumen paper — now almost entirely out of date — may remember one method once recommended to avoid the inevitable browning which rendered the paper useless, consequent upon keeping it for a day or two. It consisted in washing all the free silver from the surface directly after sensitizing, after which the paper would keep good for weeks; but would take days or weeks, rather than minutes, to print. To make it available for this purpose, all that is necessary is to saturate it with the vapor of ammonia. The simplest method of doing this is to store it when required for use in an earthenware jar with a lid, first placing at the bottom of the jar a saucer or

cup containing a small quantity of strong ammonia solution (covered, of course, so as to prevent contact of liquid and paper). The lid also is made to fit almost air-tight by laying upon the mouth of the jar a piece of wide rubber cloth of the requisite size, pressing the lid upon it. Any old hand who was accustomed to the "fuming" of sensitized albumen paper, an almost universal practice, at any rate in England, years ago, will need no instruction about this matter. It was found that the washed paper, virtually insensitive before treatment, became quite as sensitive if well fumed as the ordinary untreated paper, with the added advantage of toning with perfect freedom of mealiness. It was observed, however, that the ammonia was apt to become dissipated before the printing was complete and the paper again became insensitive.

The photographer we speak of operates his old or waste bromide and gaslight paper in exactly the same manner; but, to avoid or minimize the loss of the ammonia during printing, instead of fuming the paper alone, he also fumes the thick felt pads of his printing-frames, quickly covering them with the rubber pads such as are used for platinotype-printing, but, of course, in the reversed position as regards pads and paper. He finds that the paper under those conditions prints out very satisfactorily, and further, with, at any rate, most brands, he is able to tone it as though it were ordinary printing-out paper if he so desire; though, as explained, his main idea is to employ the paper as a saving, of printing-out paper, so commonly used for "rough prints."



BIRDLINGS

CHARLES J. ADAMS

Picturing Children Afield

CHARLES J. ADAMS

AFIELD with a camera on a summer's day, with a group of merry children flitting like little angels of light about one's path—what nearer approach to Paradise is granted to man in the course of his earthly pilgrimage? Some stern souls there are, I suppose, who still give thanks, like the Apostle Paul, for the putting away of childish things. But I content my mind with the glad recollection that it was one greater than Paul who said, "Except ye become as little children, ye cannot enter the kingdom of heaven." And to picture them in their happy play, amid the meadows and the sun-flecked woods—to picture them thus, and to find supreme delight in the portrayal of their innocent joys—is surely as efficacious a way as any to cherish and nurture in one's own aging bosom the fragrant flower of childlike purity that the Master blessed and loved to cherish.

If it does nothing else, it admits one to the intimate friendship of children, and that in itself is something not to be despised. Rejected of men one may be, may miss the glittering prize of worldly success, and still possess his soul in peace if the children of his acquaintance hail him as their friend. To see them gather around him, whenever he appears with his black box; to hear them beg for the privilege to accompany him on his ramble, and even for the honor to carry the camera and its sprawling tripod, is ample reward for many an hour of grinding labor in shop or office. One knows then that he is of the elect, for the intuition of childhood in the bestowal of its friendships is the nearest thing we have in life to infallibility of judgment. It is true that the little folk demand much; but blessed is the man of whom their demands are made, for they give vastly more than they take, and theirs are the priceless gifts of royalty.



DAISIES

CHARLES J. ADAMS

Childhood is an elastic term. The children of whom I am thinking as I write, those who are my most constant comrades, range all the way from five to fifteen years. Each age offers its own peculiar opportunities and rewards to the maker of pictures. Each has its own characteristics, to capture which — by means of the camera — one has to vary his methods. Nevertheless, there are certain characteristics and moods which are common to all. It is the picturing of these that I wish to touch on lightly in this brief article.

My favorite method of work, wherever it can be made to apply, is not to follow my intended "victims" as one would follow game, stealthily, but with more or less deliberation to select the proper setting and place my subjects properly

within it. Then, to interest them in the doing of something — what it is, matters little, so long as it is appropriate to the setting — and, when they have forgotten my presence and the presence of the black box, to make the exposure at my leisure. I rarely have to wait long for the proper moment to arrive. But it should be added that one must be on the alert and able to recognize the moment when it does arrive; for once passed, it is likely to be gone forever. Other opportunities for other effects may offer themselves in rapid and bewildering succession. But the one we missed always appears in retrospect to have been the most charming of all, just as the fish that got away is — if the fishermen are to be believed — always the one monster in the lake or stream. Its value increases with age.



LISTEN!
CHARLES J. ADAMS



Perhaps the simplest and easiest way to interest children in the field, no matter what their ages, is to set them to gathering flowers, or arranging and studying those already gathered. For this, all sorts of pastoral or woodland-settings suffice, so that there is no danger of inappropriateness in the result. Moreover, the device will serve equally well, whether one is working with a single child or with two or more youngsters. Also, an astonishing variety can be obtained, and will be obtained, if one will refrain from attempts to pose his subjects. "Oh, see that lovely cluster of daisies," is a cry that is sure to result in more charming poses, assumed unconsciously, than the camerist could arrange by the most painstaking employment of his highest art. Let the children pose themselves, is the best advice that can be given to the intending picture-maker.

Of course, certain broad effects can be planned beforehand. One can maneuver so as to lure the children in front of his chosen background. One can place them so that the sun shall strike from whatsoever angle he desires. One can impel them to stand or sit, as he prefers to have them, without actually putting his wish into words. But when all this, and much else that will suggest itself on the spot, has been done, it must be repeated that the best results are likely to be attained when, in the matter of actual poses or groupings, the children are left as far as possible to their own unaided devices.

Of all the factors that enter into the problem of successful child-portraiture of this variety, I am inclined to place that of lighting first and foremost. Take the children in the open field, in the shade of a single tree or group of shrubbery, or in the dappled woods, as the occasion and your own inclination dictate. But watch the direction of the light, and especially the manner in which it falls upon and illuminates the hair and the light summer-garments of your subjects. Some of the most bewitching effects are obtained when the sun is almost directly behind your subjects, in which case, however, be sure to give full exposure.

It has been so often repeated that one hesitates to say again that the best light to work in is that of early morning or late afternoon — a fact that cannot be too strongly emphasized. But do not be afraid to work at noonday if that affords you the best opportunity, for even then a little attention to the direction of the light and to the surroundings will often enable one to obtain some stunning effects impossible at earlier or later hours. But the softer lights are more easily managed, and result in the larger number of successful and pleasing child-pictures.

Light-colored garments prevail during the summer-months — soft, filmy dresses in the case of girls — and these against dark masses of foliage sometimes occasion difficulty. The best remedy is prolonged exposure and, of course, careful development in whatever developer you are accustomed to use, diluting it amply and working for softness in the negative.

As to apparatus, the best — for you — is doubtless that to which you are most accustomed. The really important things are to know one's materials thoroughly, and to have decided, beforehand, by just what process or processes one will attain his ultimate print. By this means he will be able to make every step lead directly toward the desired result, and there will be less likelihood of failure or disappointment.

As I use a small camera almost exclusively for such work, and depend upon enlargement for the finished picture, my methods are doubtless different in some particulars from those which have been found best by many other workers. I suppose that the greater part of my exposures are made at $F/11$, and almost invariably the enlargements are produced through a "Portland" soft-focus lens. In this way any desired degree of diffusion can be obtained, and the final result is as completely under the control of the worker as if the original negative had been made with a soft lens and enlarged with the usual "sharp" lens. In fact, I have had better results by the former process than by the latter, although I know many successful workers who hold that the opposite method is the only reasonable one. It seems to be purely a matter of personal preference and getting thoroughly accustomed to the manner of personal working that suits one best.

As to exposures, I find the best guide to be such tables as those that appear in the pages of PHOTO-ERA. They are thoroughly reliable, and very simple in their operation. It is always best to err on the side of full exposure, and those cases are rare when I do not give slightly more than what the tables call for.

There are cases that demand the use of the ray-filter — one lengthening the exposure, say, three or four times. However, in my own experience I find that I can usually do without a filter, especially in the somewhat yellow light of late afternoon, which is my favorite time to work. But where the conditions call for the filter's use it is folly not to employ it.

Finally, I would express my conviction that there is no more joyful adventure in life than that for which I have tried to give the simplest directions. No pictures that can be made are, on the whole, more satisfactory or likely to retain

their interest longer. The normal child is a creature of the out-of-doors, and, to my mind, the out-of-doors is incomplete without the presence of the child. It is in the combination of the two, and the attempt, oftentimes enough a

vain attempt, to portray some happy aspects of the combination, that I have spent many of the pleasantest and most profitable hours of my life. My earnest advice to the tired, nerve-racked business man is, Go thou and do likewise.

Focusing in Portraiture



HERE is a vast difference between the class of definition that is required for commercial work and that which is pleasing in portraiture. The desideratum in the former case is sharply defined detail throughout the whole subject, and in the latter a degree of definition which in its sharpest planes is only sufficient to avoid any suggestion of fuzziness, and gradually falls away in the less prominent parts of the composition. Even if it were possible to make a lens which would give universal sharpness at a large aperture, it would not be acceptable to the artistic portraitist, for it would only mean that every detail in the drapery or background would claim equal prominence with the features. At the same time, this concentration of focus may easily be overdone, and the skill of the artist is shown by his success in balancing the definition throughout his subjects. Most people probably will find that they can obtain better results by using a lens which at full aperture has a slight tendency to give what used to be termed "diffusion of focus," for if the definition is in no plane absolutely sharp, the further softening, due to lack of depth, becomes less apparent. Many of the large, rapid anastigmats, working at $F/5.6$ or over, possess this quality in a marked degree; whereas the patent portrait-lenses of Dallmeyer and Cooke are so constructed that the amount of diffusion can be regulated at will. The object of the photographer naturally is to obtain the requisite degree of definition at the largest possible aperture, and it is in this that the skill of the operator is called for. It is astonishing to see what different results two equally good operators will obtain from the same lens if one has been using it regularly and the other has not. One reason for this is, we believe, that many lenses have a slight residue of chromatic aberration, not enough to be noticeable at a glance, but enough to destroy the effect of careful focusing. An operator who is accustomed to such a lens realizes that the plane of sharpest focus is slightly removed from the visual plane, and accordingly focuses a little forward or back of this point for sharpness, as the case may be.

Granted that a sufficiently sharp focus can be obtained on any one point, we have next to endeavor to obtain as good general definition as possible of other essential points. This is done by what old hands call "dividing the focus," that is to say, racking the camera back to and fro, until, with a little loss of definition of the principal point, other parts are satisfactorily rendered. Thus, in a large head it is usually found that when the eye is sharp the ear is unsharp, and *vice versa*. We must, therefore, rack the camera in until the eye begins to lose its critical sharpness, when a perceptible improvement will be found in the definition of ear. At greater distances the chief difficulties will be encountered in connection with sitting figures and groups of two or more persons. Here the nature of the lens has an important bearing. With a good anastigmat of long focus at full aperture, it will be found impossible to get both face and knees, or two figures not on the same plane, into focus at once without using the swing-back; but with a portrait-lens having a strongly curved field and little astigmatism — qualities which are usually associated — much may be done by placing the figure or group so as to accommodate itself to the lens-field. Thus, if we place a sitting figure so that the head falls in the center of the field, the hands and knees will be found to be almost as well defined as the face, even with so large an aperture as $F/3$ and a focal length of 11 inches. The lens, of course, must be lowered so that the center of the field comes above the center of the plate. In the case of a group of three persons, the arrangement is quite easy; but with two figures only, the lens must be decentered by sliding the camera-front to whichever side may be necessary.

The most important aid to focusing, in portrait-work, is to be found in the swing-back adjustments of the camera, these being of the greatest value with any type of lens. Every studio-camera should possess not only the vertical but the side-swing, the latter being almost as important as the former. It must be remembered, in using the swing-back, that a final focusing with the ordinary rack is necessary after the



A BIT OF NEW ENGLAND

JAMES C. BAKER

swing. Great care must be exercised in using the swing with a short-focus lens, for if this swinging be overdone the near portions, such as the hands in a sitting figure, will be too large in proportion to the head, or one arm will appear nearly twice as broad as the other.

Unless the operator is naturally short-sighted, it is very desirable to use a proper focusing-eyepiece, as this renders it easier to judge the degree of unsharpness in any particular place, and the ground-glass should be oiled so as to make it more transparent. The focusing-cloth should be ample in size, and, if possible, fixed upon a light frame-work attached to the camera, so that it is always in position. Such a frame-work is usually arranged also to project forward and screen extraneous light from the lens.

To conclude, let us emphasize the necessity of a thorough knowledge of the lens, so that any little peculiarity may be used with advantage. A few simple tests with printed matter will reveal much. For example, a page of type should be photographed at full aperture and also with a medium-sized stop. If, on comparison, it be

found that the former image is not so well defined in the center as the latter, it is an indication of spherical aberration, or a little natural "diffusion of focus." By photographing the same page at an angle, the center line being sharply focused, we may see whether any chromatic aberration be present and in which direction allowance must be made for it. Only when we are in possession of such knowledge can we work with the certainty that we are getting the best possible out of the lenses.

British Journal of Photography.

[It may be well to add that the old-time portrait-objectives (Petzval system) possess an atmospheric quality not found in the anastigmat, which represents the highest optical perfection. As those old portrait-lenses have been largely displaced by types of modern construction, they will be found in most bargain-lists at frequently one-fifth of their original retail-price. With one of these (somewhat bulky) lenses and a used portrait-camera, the skilful amateur can get much valuable practice and should be able to produce some specially artistic results.—*EDITOR.*]



TAKING AIM

EDWIN B. WHITING

Six Years, Twelve Tears and a Pinhole-Camera

EDWIN B. WHITING



SIX years on earth, a pinhole, a film-pack and enthusiasm brought Boy photographic results of unusual merit for his first dozen. Why did Boy choose a pinhole instead of a cheap lens for his first camera? For the simple

F/16 or F/32. A pinhole can be used successfully with a much more simple type of shutter than a lens with its large light-opening. In neither the making of a pinhole-camera, nor in the taking of pictures with it, does the ugly bugaboo of focus raise its head. A problem of all art, re-

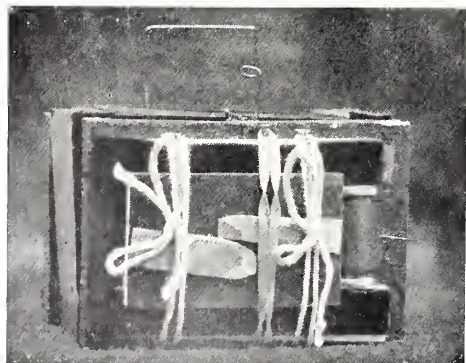


FIGURE 1

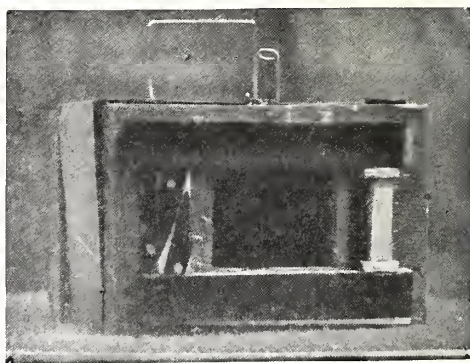


FIGURE 2

reason that he could be more sure of proper exposure with the slow-acting pinhole. A six-year-old can count forty, sixty or twice sixty seconds far better than he can estimate the one-third to one-second required for correct exposure with

ceiving of impressions, solved itself for Boy's camera by using a film-pack in the simplest imaginable form of back. Boy is too young to develop his own films in safety to clothes and things in general, and the films themselves in



LANDSCAPE

EDWIN B. WHITING

particular, so that the easiest arrangement for the camera-back had to be chosen.

Whatever your age and present stage of decrepitude, should you be tempted by this description to build the simple, efficient camera described below, and should you be uncertain about the focal length, the best way to figure this out is to make the wire view-finder for the camera first. Make a rectangle of wire just the size of the film you expect to use. As a peep-hole for it, bend a small loop on the end of a straight piece of wire. A distance of half the shorter dimension of the rectangle from the loop bend the wire sharply at right angles and use the bent part later to fasten the peep-hole to the camera. Looking through the loop, held close to the eye, note the view taken in by the rectangular frame as you move it to and from the loop. When the angle of view is what you want in your pictures, measure the distance from the peep-hole at your eye to the center of the rectangular frame. This distance gives the focus, or length, of your camera. Boy's camera, with a four-inch focus, uses the smallest-sized filmpack — $1\frac{3}{4} \times 2\frac{3}{8}$ inches. This focus is nearly one and three-quarters times the longest dimension of the film. This is proportionally longer than the focus of most hand-cameras; but it gives a larger image, and the



HOME

EDWIN B. WHITING

narrower angle does no harm, as the finder is extremely accurate. A rough inch-plank, a smooth fragment of half-inch wood, a small scrap of sheet-brass, two dozen screws, a piece of cigar-box for shutter, some old black-velvet ribbon, three brushfuls of black varnish, one two and a half by four inch tray sample of varnished hardwood, used to hold filmpack in place, and about a foot of wire for finder, mixed with a little elbow-grease and a lot of fun, and behold! — the ideal became the real.

The specifications for what Boy called a "downstairs camera" implied much-needed strength for rapid descents three steps or more at a time, hence the inch-planking. Moreover, inch-stuff is light-proof, and boys have been known who were naughty enough to leave cameras right out in the broiling sun. To make the box light-tight, velvet ribbon was inserted in all joints as the camera was built. Any kind of soft black cloth would



PORTRAIT

E. B. WHITING

answer for this purpose. Before fastening on the back, the inside of camera was blackened with dull black varnish. If you have no matte varnish handy, shoe- and stove-blackening, not to mention ink, offer dark possibilities. On the inside of the front, tack the piece of metal-sheet with the pinhole in it. Paste, glue or tack black paper around the edges of the metal, so that light reaching the film comes only through the pinhole. The pinhole, being on the inside, keeps free of dust, and is out of the way of the shutter. In making the pinhole, Boy could not see the point of his not being allowed to make it alone without help. At his age, a hole means something considerably larger than one hundredth of an inch more or less. He had to allow himself to be helped.

A pinhole is the easiest thing in the world to



MAKING THE PICTURE

EDWIN B. WHITING

make if one goes at it systematically. First, "worry" a small thin place in the metal, using a drill, penknife, file, nail, or even a sharpening stone. Just BEFORE the hole is punched entirely through, gently push the point of a very fine needle, No. 12 or smaller, through the metal. Smooth the edge of the hole and blacken it in a match-flame, if no better way is available. If brass or copper sheeting are unattainable, the cover of the every-day tin can will answer for making the pinhole. The square hole in the back-board of the camera-box is about one-eighth of an inch smaller all around than the outside dimension of the filmpack, which rests face down on the edge of the hole, with no tendency to fall through. With the filmpack in place, a frame of smooth half-inch lumber — which happened to be exactly the same thickness as the pack — was built around it, a nice snug fit. The filmpack once in its snug little nest, the back-board, or cover, is placed on top of it and tied securely, effectually shutting off all light from the pack. With this arrangement, Boy can change a filmpack in about three minutes.

One would hardly be blamed for thinking that a pinhole-camera was a rather poor tool for a lively boy. But a boy of six is far from demanding absolute perfection. Moreover, a camera with a cheap lens and shutter in the hands of a small boy rarely stops motion either of the taker or of the taken. At this age nine out of ten of the poor-lens camera-pictures will be "jerked" or underexposed, or both. The pinhole-camera performs a remarkable feat. Boy opens the shutter, jumps into the picture, and sits STILL for over a minute. Think what that means in the way of self-discipline. He dashes back to the camera and "shuts her off." The results are much less ghostly than one would expect.

Boy derives great satisfaction after each picture in pulling out one of the "tears," as he calls the black papers of the filmpack. Tear, meaning to rend; not, to weep. Any softness of definition does not bother Boy, nor does he seem to mind in the least when his younger sitters have three or four faces and feet. He takes such minor details for granted and is immensely proud of "his" camera.



Burson Makes an Easy Dollar

MICHAEL GROSS

THERE was a knock at the studio-door. At Burson's "Come in!" it opened, and a buxom, red-faced Irish woman entered. Burson recognized her as Mrs. O'Roon, who, with her numerous progeny, occupied rooms on the ground-floor.

"What can we do for you?" Burson asked with a smile.

"Sure, I'd like to get a photygraft taken of my four young 'uns, to send back to their grandfather in Ireland," Mrs. O'Roon answered. "A dollar is all I have to spend, but I'd rather you boys have it than some strange photygrapher."

"We certainly appreciate your kindness," Burson said, "and, although it's a little out of our line, we'll be glad to take the photograph for you. Send the youngsters up the first thing to-morrow morning"—and Mrs. O'Roon promised to have them there by nine o'clock sure.

"We're going to have an extra piece of pie with our lunch all this week," Burson announced to Art that night. "I'm making an easy dollar to-morrow morning, and we might as well eat it up as spend it any other way."

Pressed for details, Burson told of Mrs. O'Roon's visit and the outcome of it.

"So you think you are going to make an easy dollar by photographing that O'Roon quartet?" Art asked when Burson had finished. "Have you ever tried to herd four healthy Irish youngsters into a 6 x 9 studio-room?"

Burson confessed that he never before had attempted the feat, but ventured that managing four little tots was his idea of no job at all.

"Maybe I'm wrong, then," Art said; "and if I am, you'll have a chance to prove it to me to-morrow morning. Meanwhile, I'm not going to spoil your pleasure by telling the horrible details connected with my last attempt along that line."

Burson laughed. "To hear your 'calamity-howling' one would think we were in business for fun, and could afford to let an easy dollar slide because making it entailed a little effort. I suppose if you were handed the dollar on a silver tray, you'd want it put into your pocket for you."

But Art, having delivered himself of his "say," declined to utter another word on the subject.

The next morning, at about eight-thirty, the four O'Roons—two boys, about five and seven respectively, and a pair of four-year-old twins—

bounced into the studio. Burson seated the four on a bench in one corner. "Now you stay there," he said, "until I come for you"—then, taking a box of plates and a plateholder, he went into the darkroom.

The O'Roons were still for almost two minutes, after which time, seeing that Art—who sat at the opposite side of the studio—was busy with the morning-paper, they slid down quietly from the bench and started off, in different directions, on an exploration-trip. Art followed them out of the corner of his eye, for he had a theory to vindicate.

Suddenly he dropped the paper and jumped toward the developing-table in great leaps. One of the twins had discovered a graduate full of bichloride of mercury intensifier and was about to lift the glass to her lips. Art reached her just in the nick of time, and dashed the glass out of her hand, smashing it and spilling the contents all over the floor. Then, gasping for breath, he sank into a chair. Looking up, a few moments later, he spied the other half of the O'Roon twins. She had pulled a stool to the camera—set up on a tripod in one corner of the studio—and was now poking her finger into the lens-board to chase out the "birdie." Art, with visions of spending five dollars to have the finger-prints ground off the lens, hustled over and pulled her away. Fortunately, the lens happened to be capped and no mischief was done, but, for the next few minutes, the old tenement rang with the shrill howls of the O'Roon twin, thus rudely parted from her new-found toy.

Art was no sooner again seated, when one of the boys shouted out from the other end of the room, "What's in this box, Mister? Kin I open it?"—and then, without waiting for an answer, the youngster, to satisfy his curiosity, lifted the cover off a box of 11 x 14 plates. Art, by a streak of prodigious traveling, managed to hustle over before the boy could take off the inside cover, but it nearly gave him heart failure to do it.

"If this is making an *easy* dollar, I always want to work hard for my money," Art muttered savagely, as he put the box on a top shelf, out of reach.

The oldest boy, in the course of his travels, had now reached the darkroom at the other end of the studio, and, seeing the "STAY OUT—THIS MEANS YOU" sign tacked on the door, decided to investigate further. Art, recovering from his last lightning-attack in defense of the

plate-box, heard the knob rattle as the boy turned it, but he remained seated. "It's Burson's easy dollar," he grinned to himself. "Let him have the pleasure of earning some of it."

By this time the youngster had swung the door half open and stepped across the threshold. Suddenly he came flying out, propelled, seemingly, by some force inside. "What the devil are you doing here?! Why don't you stay where you are put?!" Art heard Burson yell, and then the door was slammed viciously.

The boy ran over to Art. "That fellow in there is mad because I caught him taking a yellow glass out of a box and putting it into a little frame. If he's your partner, you ought to keep an eye on him. I'll bet he meant to take that glass home. That's why he was working in the dark, and got mad when I came in."

Art smiled, but did not say a word. A few minutes later Burson came out of the darkroom carrying a loaded plateholder. He brought over the camera and then arranged four chairs near a window. "Now, ladies and gentlemen," he said, turning to the little group, "if each of you will just sit down in one of those chairs, the operation will be over in one minute."

The four frightened O'Roons approached the chairs slowly, in battle array. Then suddenly bedlam broke loose. Each O'Roon wanted to sit in the very chair that some other O'Roon had picked out for his own especial use. In ten hot, perspiring minutes Burson had arbitrated the quarrel, and — peace once more restored — he trained the camera on the group, focused, inserted a holder and prepared to make the picture.

"Watch the birdie, now," Burson said, in his most soothing tones, as he took up the bulb.

"Aw, dere aint no birdie in dat thing," came in sarcastic tones from the eldest O'Roon. "Tell dat fairy tale to Sweeny."

Burson, willing to sacrifice the point in the interest of peace, said: "All right, then, there is n't; but please keep still for one second. Now then." He pressed the bulb, but, just then, one of the twins was seized with an uncontrollable fit of giggling. The O'Roon seated directly in back of her jumped up to administer what he considered a well-deserved rebuke. As the shutter closed, the other two O'Roons, evidently with a view to helping him, also stood up.

"That plate is spoiled, sure as shooting," Burson muttered, as he quickly took out the holder and reversed it. "I'll need a thousand feet of film to do justice to this pack of scrappers."

He turned to the group again and told them he was going to take the picture over. "If any one moves," he warned them, "I'll throw him out of the window." Frightened by the manner in

which the words were spoken, the O'Roons, when Burson again pressed the bulb, sat like little graven images, and the photograph was made, this time without a mishap.

It took both partners to drive the youngsters out, for they insisted on being shown the finished picture. In vain they were told that it had to be developed first. They knew better. All they had to do was wash the plate and the picture was finished. However, the studio was finally cleared, and while Art, in an effort to soothe his shattered nerves, laid out at full length on one of the benches, Burson went into the darkroom to develop the plate.

In a few minutes he came out. "It's a beauty," he said to Art enthusiastically, holding the hypo-soaked negative up to the light. "Clear as a whistle, and not an O'Roon moved."

That night Burson made three prints from the negative, mounted them, and then went down stairs to deliver the order to Mrs. O'Roon. In ten minutes he was back, flourishing a dollar bill.

"Well, I've brought home the bacon," he said, as he caught sight of Art still on the bench. "Here's the wherewithal for that extra piece of pie all week. Mrs. O'Roon is so well pleased that she is going to tell all her neighbors to send their youngsters up to us to be photographed."

"May Heaven grant that she forget to do so, or change her mind about telling them," Art said solemnly.

"Why? What's the matter?" Burson inquired petulantly; "does n't the idea of making a few easy dollars appeal to you?"

"It does," Art observed slowly; "why don't we make a few of them?"

"Well, here's an easy dollar," Burson exclaimed, flourishing the bill.

"I'll admit that's a dollar," Art said, "but I won't admit it was an easy one to make, or that we even made it."

"What do you mean?" Burson queried.

"Just this," Art answered. "I've prepared a little itemized bill showing what it actually cost us to turn out Mrs. O'Roon's three photographs. Listen to it" — and Art, picking a sheet of paper up from the table, read:

"1 — 16-ounce graduate; broken to save an O'Roon from sudden death — 40c.

"1 — 5 x 7 plate spoiled by an inquisitive O'Roon who opened the door — 10c.

"1 — 5 x 7 plate spoiled by the O'Roons vibrating at the wrong time — 10c.

"1 — 5 x 7 plate on which the picture was finally taken — 10c.

"3 — 5 x 7 prints from the negative — 15c.

"3 — mounts on which the photographs were tipped — 20c.



WOODLAND-PATH
A. A. FALLS

"Incidentals, including a fresh bichloride of mercury bath wasted — 40c.

"The total is \$1.45, and if you attempted to live on all the pie the difference between that sum and the dollar you got for the pictures would buy, you would starve to death. In addition to the actual money-cost, tack on the five years by which I have shortened my life keeping that gang from wrecking the studio, and also the five years you have lost taking the photograph. By all means," Art ended up, "let the neighbors get into the habit of sending their offspring here to be photographed. It will be a charming experience, even if we don't make a cent."

Burson did n't say a word when Art finished for the simple reason that there was n't a word to be said; but that night, when, after locking up the studio, the partners reached the street, Burson held out his hand. "Suppose we just confine ourselves to commercial work after this, and let those Fifth Avenue specialists tend to the photographing of children. What do you say?"

Art felt like saying "I told you so," but instead, taking Burson's outstretched hand in a firm, hearty grasp, he merely said, "I guess that will be best, Burson, old boy"—and with the words the incident of the fighting O'Roons was closed forever.

Holding a Vest-Pocket Camera

CHARLES R. DENTON



ANY hand-camera failures, beyond doubt, are due to movement of the camera at the precise moment of exposure. Beginners are particularly liable to this kind of misfortune, and a large number of their spoilt negatives can be traced to such a cause. If this trouble is experienced when a large and bulky magazine camera is used, affording plenty of surface for a steady hold, what is to be expected when a vest-pocket instrument, with its tiny mechanism and entire absence of large surfaces, is tried but a prolific crop of blurred and fuzzy pictures?

Thus a little consideration of the causes of movement and their remedies will go far to eliminate much wasted material. Roughly speaking, holding the camera in an unsuitable position and pressing the shutter-release clumsily are the most common mistakes made by most hand-camera workers. The modern vest-pocket camera is not a toy, and should not be handled as such. It is a highly scientific instrument of great precision, and if properly treated will give excellent results. As each person is sure to have his own individual way of holding a camera, which to him is the easiest and most comfortable position, it is well to remember that no fixed rule can be laid down in the matter. So the most that we can do is to inquire into the principles underlying the correct way to hold a camera when in use, thus enabling the worker to adapt most successfully his own particular position.

When a tripod is contemplated for use with a camera we are advised, and justly, to select one having steady, substantial legs and a large, firm top. The same principle should be followed when the human body is used in place of the tripod.

If the body is balanced evenly and firmly on the legs, and the largest possible amount of hand surface used to hold the camera, the first steps in the right direction have been taken.

The next point is the pressure exerted when releasing the shutter: this pressure should always be balanced by an equal amount of resistance exerted from the opposite direction. Of course from a strictly scientific view-point this is well-nigh impossible of attainment by the human body, but the foregoing is the principle of the idea, and we should approach it as near as we can.

Another point of singular importance is the correct way to release the shutter. When a recruit is taught musketry, he is instructed not to *pull* the trigger of his rifle, but rather to *squeeze* it gently, so that it is released practically without any perceptible movement. Follow the same idea with the shutter release, and try to get a gradual, continuous action, so that the shutter seems to open smoothly at the exact moment of exposure, and a more generous proportion of successes will be the result.

The Amateur Photographer.

[Mr. Denton is evidently not familiar with the "third hand"—a means to operate an antinous or wire-release by means of the tongue, described by W. H. Blacar in a former issue of PHOTO-ERA. The release, as used by Mr. Blacar, must be at least two feet long. If the automatic shutter works very hard, the tongue must develop considerable force to effect its release, but with easily working shutters there will be no difficulty. A direct view-finder enables one to hold the camera on a level with the eyes, the teeth, lips and tongue taking the place of the third hand, so often needed.

In using the camera at the height of the hips, and holding it with both hands, one can direct it by looking in the finder and standing still, keeping it pointed at the object; then, disregarding the finder, looking at the object, and pushing the tongue against the wire-release at the right moment. A picture of a runner can be made in this way: Make a mark in the road, say fifty feet from

your standpoint, set the focus for that distance, hold the camera and release in the manner described, watch the oncoming runner and, when he arrives at the mark, push the tongue against the release. This operation is equivalent to placing the camera on a tripod, or some firm temporary base, only it is many times more convenient and ensures success.—EDITOR.]



KINNIKINNIE

KENNETH HARTLEY

Restoring Daguerreotypes

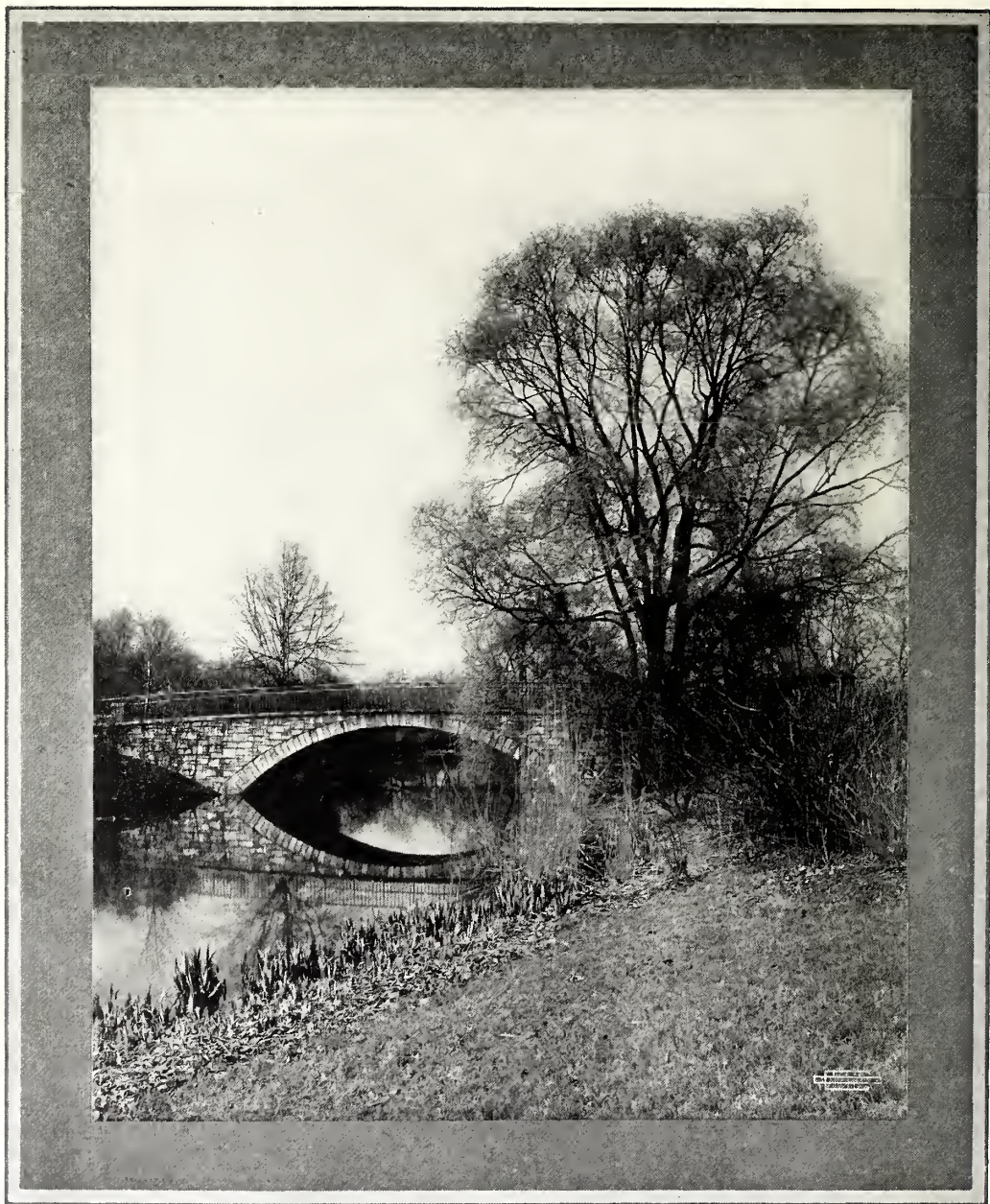
C. E. BOLD

HITHERTO it has been usual to advise those who have a tarnished or discolored daguerreotype which they wish to have restored to put it into the hands of an expert in such matters; but time has passed, and those who have worked the daguerreotype-process have joined the great and silent majority, so that it is no longer possible to act on such advice, and if the work is to be done, it must be done at home. We may point out, before describing it in detail, that the daguerreotype image is of an exceedingly delicate character; the lightest touch may injure it irreparably; and if its record is a valued one, the most ordinary caution will show the expediency of making a careful photograph of it before subjecting it to any operation whatever. Having got as good a negative of it as we

can, we may then proceed to put the restoration in hand.

It was usual to bind the silvered plate to a piece of glass by means of strips of gummed paper, so as to exclude dust, and the first operation, therefore, is to get rid of the binding and remove the glass. A little gentle coaxing with the point of a knife will remove the glass and picture from the passepartout by which it is usually protected, and a few strips of damp blotting-paper laid on the paper-binding will generally soften the adhesive enough in a few minutes to allow the binding to be peeled away and the glass lifted off without damaging the mat with moisture.

We repeat at this stage the caution that no solid substance, whatever, not even the lightest tuft of cotton or the softest camel-hair brush, must be allowed to touch the face of the picture.



NEAR LONGWOOD, MASS.
CLIFTON CHURCH



If there is any dust on it, it may be blown off; but it is better not to do anything of the kind, at all, leaving it to wash off, as it is almost sure to do very quickly. To this end the plate, face upwards, is placed in a clean dish and a little alcohol poured over it. Only just enough to cover it need be used, and the alcohol should be spirits of wine, and not methylated spirit, as this contains a gummy product, which will be precipitated on the image when water gets to it. After five minutes or so in the spirit — the dish being rocked, occasionally — the spirit may be poured off and the dish put in the sink under a steady stream of water from the tap, for a few minutes. The surface of the picture will now be found to be free of any adherent dust, and ready for the next step.

This is to apply a weak solution of potassium cyanide, a highly poisonous substance, which will remove the tarnish but will not attack the image itself. A ten-percent solution of the cyanide may be made up, and then putting a couple of ounces of water into a graduated measure, a dram of the cyanide-solution is added to it, the mixture is swirled round, and poured over the picture in the dish. The dish is rocked for half a minute or so and watched to see if the tarnish dissolves. At the end of a minute the solution may be poured back into the measure and strengthened with another dram of the strong cyanide solution, and the operation repeated. This can be done again and again, until as much of the cyanide solution as of the water is present; but it is not likely that anything like such a concentration will be needed, unless the sample of cyanide in use is very old and has deteriorated.

As soon as the tarnish has vanished, or sooner, or if there is the slightest sign that the image is being attacked by the cyanide, the solution must be poured off at once and the dish filled with water, which should be changed several times to wash away the cyanide as quickly and as completely as possible. The washing need not be very prolonged, as there is no absorbent film of gelatine or other vehicle, the whole of the action being on the surface. Ordinary tap-water can be used for the operations up to this point; but the last washing of all must be in distilled water, as the impurities in tap-water would leave a mark on the surface of the picture on drying.

So far there has been nothing which calls for any dexterity or skill; mere ordinary care to avoid touching the face of the picture, or allowing the cyanide to act too far is all that is required. But for drying the plate something more is needed if it is to be left spotless. It must be taken out of the dish of distilled water in which it is lying, and held with a pair of pliers at an angle of 45° by one corner diagonally, so that the lowest cor-

ner is next to that held in the pliers. A Bunsen burner or a spirit-lamp will be required, and then, after pouring over it a fresh lot of distilled water, holding it all the time at the one angle, the top corner is brought over the flame, and several inches above it, so that the warmth begins to dry it off. As it dries the plate is gradually moved over the flame so that drying may proceed steadily downwards until it is complete. Any pause in the drying is apt to leave a mark, and if the plate is made at all hot, the image will be injured. When dry, the mat and glass should be replaced and the picture bound up at once before there is any chance for it to get injured.—*Photography*.

[The author of this article is stated to be a veteran daguerreotypist, which is evident from the nature of his advice, which is good, in the main, but old-fashioned. Present-day experts, in this country, use a much simpler and safer process, so that a stained or tarnished daguerreotype can be completely restored in less than half the time required by the old method. Of course, physical injuries, such as scratches and dents, cannot be remedied. Nevertheless, it is not true — as some writers seem to think — that the work of restoring successfully discolored daguerreotypes requires no special skill; but if the layman prefers to undertake the work personally, it is advisable that he practise on daguerreotypes that have no particular value. These may be picked up with little difficulty and at small cost.— EDITOR.]



The Photoplay vs. the Spoken Word

MANY persons feel that the photoplay is destined to supplant the legitimate drama; but the writer does not believe that this can ever take place, since the motion-picture film appeals to the eye alone and is therefore limited to a comparatively low grade of intellectual appeal and to a crude emotional stimulus. The drama, on the other hand, appeals to both the eye and ear, and since it places actual individuals before the spectator, an appeal not only through muscular and facial expression but through the ear as well is made, the spoken word being a far more potent factor in stimulating an emotional response than is the case with the eye. Should the reader be inclined to doubt this, let him try to imagine any photoplay which would be capable of arousing the feelings stimulated by the quarrel between Brutus and Cassius in "Julius Cæsar," or by the Council of Infernal Peers in "Paradise Lost," and it will be seen that the photoplay is totally incapable of rising to the emotional heights possible to the spoken word.— PAUL L. ANDERSON.



Courtesy of Houghton Mifflin Company

TARBELL'S SPRINGS
HERBERT W. GLEASON





EDITORIAL



Straight Lines in Pictorial Photography

IN his admirable essay, "Standard of Art-Measurement," E. Wellington Rueckstuhl says: "Although there are lines in nature we see but few, and what we call lines are generally only the contours of objects or the limits between spots of color. But nature seems to abhor straight lines nearly as much as she does a vacuum, always seeking the curve. So we see few straight lines in nature, and when we do, we see them broken. Examine the edge of a razor with a microscope and you will find the line like a saw's teeth — broken. The straight lines of a pine-tree's trunk are broken by the projecting branches. Therefore we do not see rigid, sharp lines in nature — all is softened. We see sharp edges only in things mechanically made by man. Hence, in all art too many straight lines and too much sharpness of line should be avoided by unnoticeably breaking the lines; if this is not done, then lines will become more hard and insistent than in nature, and so attract too much attention to themselves as lines. *Per contra*, if the line is broken awkwardly or carelessly or coarsely, so that we notice the breaking, that again attracts attention to itself, and so, again, is bad."

The above doctrine may be applied to pictorial photography. Every one is familiar with the Madonna di San Sisto, either from the original painting or good photographs. It is composed almost entirely of curves. The outlines of each human figure and fold in the garments are drawn distinctly, yet without insistent sharpness. The same is true of Michelangelo's "Creation of Adam" and many other masterpieces. The photographer certainly can do no less than the painter; and when — as it happens frequently — the drawing of a photograph (from life or from nature) is defective by reason of bad focusing, or the use of a poorly constructed lens, photography *per se* cannot be held responsible. There is no excuse for false perspective, distorted contours or unrecognizable detail unless the photographer lack skill in the use of his apparatus. Even the now popular supplementary uncorrected or soft-focus lens, when used judiciously, will yield pictures with softened outlines yet correct in drawing. Witness the ex-

quisite work of Charles O. Dexter, Frederick W. Horsman and others that has appeared in these pages. Who is not familiar with photographs of wood-interiors in which branches and foliage, outlined against the light, have lost their true outlines and are disfigured by innumerable light, circular spots; or outdoor-scenes where the focus falls off abruptly, so that distant objects have lost their original shape or have disappeared altogether? That is not good photography. The Editor remembers a photograph of a man, by a well-known pictorialist, who is posed resting on his right elbow with the hand raised and holding a pipe. The hand is in a plane much nearer the camera than the man's head, and is not only the most conspicuous object in the picture, but has been distorted so as to appear abnormally large. To ask favorable consideration for a performance like this is to insult the intelligence of the beholder and to degrade photography as a means of artistic expression. The skilled and conscientious photo-pictorialist, observing the rules of art, need ask no apologies for his work.

Is It a Lost Art?

THE Editor has frequently pointed out how much we owe the old masters in photographic portraiture — the men who glorified our art fifty years ago. Such artists as Rocher, Gutekunst, Sarony and Landy are inalienably associated with the early days of artistic portraiture in America. They were conscientious and thorough, and produced portraits according to artistic principles, slighting nothing that contributed to the success of the likeness. They observed carefully the laws of composition and proportion, which to many portraitists of today are a sealed book. Hence discriminating patrons of professional studios note with astonishment evidences of careless posing such as profiles with empty eyes, parted lips, protruding ears and distorted hands. Flat lighting — usually from the front — is also criticized, although the photographer declares it quite artistic or else the latest style, whereas it should be used as an expedient — like the short-focus lens — and not generally. Present-day photography certainly shows tremendous pictorial advance, due largely to improved printing-methods, but it is not consistently artistic.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of ***stiff*** corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

Quarterly Miscellaneous Competitions

THESE will continue to be featured in PHOTO-ERA competitions during 1917 and 1918, so as to afford more opportunities to our readers to win official recognition.

Awards — "Landscapes with Figures" Competition

Closed July 31, 1917

First Prize: None awarded.

Second Prize: C. Verne Klintworth.

Third Prize: Bertran F. Hawley.

Honorable Mention: Martha Curry, John Dove, Franklin I. Jordan, W. T. Liao, Nelson C. D. Martin, E. M. Pratt, J. Herbert Saunders, Elliott Hughes Wendell, Alice Willis.

Subjects for Competition — 1917

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Domestic Pets." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Still-Life." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

To Participants in Photo-Era Competitions

PICTORIAL contributors or participants in PHOTO-ERA Competitions should remember that a print receiving a prize or Honorable Mention in either of these classes becomes the permanent property of PHOTO-ERA MAGAZINE, for reasons explained in the Rules.

Nevertheless, the author of the print is not prevented thereby from disposing of other prints from such negatives, after he shall have received official recognition. This matter is explained in the Rules, and, particularly, in editorials in the April and August issues. You are requested to read both.



THE WEARY TRAVELER

C. VERNE KLINTWORTH

SECOND PRIZE — LANDSCAPES WITH FIGURES

Domestic Pets — Advanced Competition Closes November 30, 1917

DURING the year we have had many interesting and valuable competitions which have brought out very superior pictures from workers throughout this country and Canada. The present competition — Domestic Pets — differs somewhat from the rest in subject, but surely not in interest. There are few of us who have not valued the devotion, faithfulness and companionship of a horse, dog, cat or bird. Some say that to love animals and birds is sentimental and time-wasting; but I cherish my animal- and bird-friends and I am proud to admit it. To me, and to many others, making pictures of pets is a genuine pleasure, and such pictures are treasured as lovingly as those of a human friend.

Camerists who have tried to photograph pets know — those who have not will learn — that it requires much skill and boundless patience. When a dog is accustomed to be at your heels at all times, it is no simple matter to make the same dog stay "put" at even so short a distance as across the room. He does not understand your sudden determination to keep him at a distance. He feels hurt and shows it, and thus spoils the attempt to picture him as he really is — happy, with head and ears erect, and eager to be at your side. Time and again, after you have posed him and have turned your back for a moment, he will try to reach his accustomed place at your side. Give him a whipping, some would say; very well, but by so doing you would obtain a cringing, frightened dog who would no more be true to the life than a child in similar circumstances. It is just as well to know now, once for all, that threats, whipping and harshly spoken commands will not help to pose any animal or bird for a picture that you would be proud to show to your friends.

A little thought will recall the hours, days and even months that naturalists have had to wait in order to

obtain pictures true to the life. Although it may not require days, it may mean several attempts with regard to photographing domestic pets as they really are and as they really act. To attain this end it is essential that your camera should be at hand, loaded and set for immediate use. It does not and will not follow that because you wish to make a picture of your dog he will adapt himself suddenly to your requirements. It has been my experience that the best method is to wait for the opportune moment rather than to force the issue. For example, a few months ago I wished to obtain a picture of a kitten of unusual beauty. Time and again I endeavored to make that kitten sit up and look at the camera, but without success. At length I decided to ignore the kitten completely and to let it wander about at will. However, my camera was ready. Finally the kitten in its wanderings came within focus, a slight noise made it lift its head *naturally* toward the camera — snap, the kitten was mine, true to the life. My method of procedure would be the same with regard to six kittens in a basket. I would let them fall in and out of the basket until they felt accustomed to it; then, I would replace them and await my opportunity to press the lever just as all six *happened* to look over the edge of the basket at the same moment.

Birds are sometimes difficult to photograph successfully, particularly if they cannot be allowed out of the cage. With regard to canaries and other small, active birds it becomes a matter of pitting your wits and activity against theirs. Parrots and larger birds of more leisurely movements — not in a cage — offer little trouble other than due attention to exposure and camera-manipulation.

Those camerists who live in the country will attempt no doubt to photograph horses, cows, pigs, ducks, geese, chickens and any other animals or birds that have really become domestic pets. In making such pictures do not tie a horse or cow to the barn-door,

make an exposure, then send it to us labeled "A Horse" or "A Cow." True enough, the aforesaid horse or cow might be the finest pet in the world; but your picture does not prove it. If any creature is a pet it should be photographed in such a manner as to cause the observer to understand the comradeship, faithfulness and contentment of the pet, and the relationship to its master or mistress. Unless the pictures of domestic pets are *natural*, they will be too set, artificial and uninteresting to enter this competition with any hope of consideration from the jury.

There is no finer subject than to portray the welcome that your dog lavishes on you at your home-coming. Leaping and barking he rushes toward you — ears erect, tail wagging and, really, almost a smile on his face. It thrills me and it must thrill others. A true picture of your dog showing his delight at seeing you would touch the hearts of thousands of animal-lovers. They would appreciate the sentiment and likewise the technical photographic difficulties involved; also, they would detect the slightest attempt at "bluff." Once more let me repeat: Make every picture of a domestic pet *natural* and true to the life that *you* know represents the pet as it is in your home to-day.

Any camera is suited to make pictures of domestic pets providing that the pets and weather-conditions favor the limitations of the camera to be used. Those who own box-form cameras with comparatively slow lenses and shutters will be obliged to maneuver their pets in such a manner as to bring the desired picture within the scope of their limited photo-equipment. It stands to reason that a picture of a dog, leaping and barking, should not be attempted. On the other hand, those camerists who own equipments fitted with high-speed shutters and lenses are in a position to obtain pictures of their pets under nearly all conditions. However, it must not be inferred that a high-speed equipment is essential — virtually any camera will do; but pictures should not be attempted that are obviously beyond the range of the equipment. Excellent pictures of a dog may be made as he stands at attention or sits on his haunches. Such a picture is within reach of a dollar Brownie. A picture of the same dog, leaping and barking, would be more interesting, no doubt; but better a good picture of him at ease than none at all. In short, know the efficiency of your camera, then plan to make your pets do that which your Brownie or Kodak will reproduce to the satisfaction of all concerned. Assuming, for the moment, that the camerist is in a position to use any equipment, I would advise a reflecting-camera with an F/4.5 anastigmat lens as best suited to the purpose. The advantage of watching your pet up to the moment of exposure is invaluable, and the focal-plane shutter with its speed-efficiency in connection with the fast anastigmat lens constitutes an equipment without an equal. High-grade miniature-cameras equipped with fast anastigmat lenses and high-speed between-the-lens shutters are well adapted to make pictures of domestic pets. The large aperture combined with the short focus of these lenses used in connection with high-speed shutters constitutes enough speed-efficiency to satisfy all ordinary requirements. The portability of these equipments makes them particularly suited to quick action under — sometimes — strenuous conditions brought on by a playful puppy or kitten.

No matter what the camerist's equipment may be, it is possible for him to make a picture of a domestic pet that will be welcomed to this competition. In the past we have received pictures of great artistic merit and so true to the life that jury, competitors, readers and outsiders have enjoyed this competition immensely — we believe that the pets did too.—A. H. B.

The Circle of Confusion

No term in photographic phraseology is more troublesome than "circle or disc of confusion." In November, 1916, PHOTO-ERA I endeavored to explain the meaning and use of the term as related to the manipulation of lenses. Since then there has been considerable correspondence with regard to the "circle of confusion," and it is evident that a repetition of a few essential facts concerning this term may be of service.

Theoretically, a good photographic lens focused upon an object should reproduce that object point by point upon the plate. Practically, we find that the points reproduced are not true points but *nearly* true points, and that the planes in our object, *outside* of the plane focused upon, are not registered as even "near" points but as *circles*. Since our object is composed of a great number of individual points, it is naturally our desire to have each point reproduce itself clearly, as a point, in order to make our picture sharp. What actually happens is that the plane focused upon is registered very nearly in true points, and all the other planes of our picture in circles of greater or lesser diameter. The more these circles overlap one another, the more out of focus become the planes in our picture upon which we are unable to focus sharply without throwing our principal object into circles, and thus spoiling the picture. Try as we may, there will always remain some one plane which will be reproduced in circles instead of in points. No photographic lens of whatever make or type is at present capable to render an exact duplicate of an image in *all its planes*, point by point, upon the plate.

As stated above, we find that by confining ourselves to *one plane* in our picture we can reproduce on the plate an image which is a nearly true point-by-point duplicate of our original. We have also found that other planes are reproduced in circles of *greater* or *lesser* diameter, and that some of these "lesser" circles are not unduly noticeable at a reading-distance from the eye. In short, we find that there is considerable "stretch" from the point to the "lesser" circle reproduction of our picture. Next, we discover that the human eye finds difficulty to distinguish a smaller circle than $\frac{1}{160}$ of an inch. In other words, if we can keep the "stretch" from a point to the "lesser" circle *within* a diameter of $\frac{1}{160}$ of an inch, we shall be able to get *more* than one plane of our picture satisfactorily sharp to the eye. Hence, the standard allowable "circle or disc of confusion" for ordinary requirements is $\frac{1}{160}$ of an inch.

Let us suppose that we have before us a landscape in which an old-fashioned farmhouse is partly screened from the road by two giant elms between which runs a path entered from the road by a gate. Naturally, we wish to get all three — house, trees and gate — as sharp as possible. The house is of greatest interest and we focus sharply upon it; but to our dismay we find that the trees and gate are out of focus. We then focus upon the trees to see if that helps matters. Yes; but neither the house nor the gate is reproduced clearly. At this point in the problem we remember to have read or heard about "stopping down" in just such cases to gain depth of focus. We try it and find that the house, trees and gate are now all *reasonably* sharp, or, in other words, we find that the definition of the entire picture *satisfies the eye*. What we have done really by stopping down is to prevent each point in our picture from "stretching" to a larger diameter than $\frac{1}{160}$ of an inch, and, therefore, our entire picture is pleasing to the eye. This is the true reason for stopping down to gain depth of focus.

We have been considering $\frac{1}{160}$ of an inch as being



UP-STREAM

THIRD PRIZE
LANDSCAPES WITH FIGURES

BERTRAN F. HAWLEY

satisfactory, since the eye cannot distinguish a circle of smaller diameter. However, the great interest now manifested in small cameras and in enlarging from small negatives has necessitated the use of a circle of confusion of $\frac{1}{200}$ or $\frac{1}{250}$ of an inch in diameter. Because nearly all manufacturers of lenses now use $\frac{1}{200}$ of an inch in their calculations, the average person can detect no great difference between a 5 x 7 contact-print and a 5 x 7 enlargement made from a $1\frac{1}{8}$ x $2\frac{1}{2}$ inch negative, both of the same subject. In applying the formula to find the hyperfocal distance it has been customary to use the $\frac{1}{200}$ of an inch circle of confusion in computing the distance. Now, however, most photographers use a standard of $\frac{1}{250}$ or $\frac{1}{300}$ of an inch on account of the strong probability that the negatives will be enlarged.

A. H. B.

Perspective and the Theory of Vanishing-Points

WE have frequently commented on the curious fact that many scientists fail to grasp the essentials of the subject of perspective, and another notable instance of this failure is to be found in a recent issue of our contemporary, "*The Optician and Scientific Instrument Maker*" where Dr. J. H. Roads writes upon the angle of resolution and perspective, and finally seems to arrive at the conclusion that the ideas of perspective experts in regard to vanishing-points are all wrong. In short, he denies that parallel horizontal lines appear to meet on the horizon.

The writer starts well enough by pointing out that parallel lines must appear to meet at a distance, where the space between them subtends only a one-minute

angle at the eye, and, consequently, that all parallel lines are seen to approach each other at a one-minute angle; but when he comes to apply this conclusion to the subject of perspective vanishing-points, he goes altogether wrong — evidently because he does not understand the fundamentals of perspective — and becomes especially mixed up in considering the question of the horizon. Suppose that we endeavor to follow his arguments a little more closely. It is correct to make the general statement that parallel lines appear to meet at a one-minute angle, while at the same time it is desirable to observe that this is not a rigidly exact law. It is only an approximation, and therefore it must be applied with caution as the basis of calculation. Taking it, however, as a basis of argument, it follows that the point at which closely adjacent parallel lines appear to meet must actually be closer to the eye than the point at which more widely separated parallel lines appear to do so. Thus, as the author in question states, parallel lines four inches apart will appear to come together at a point which is approximately 1,320 feet from the eye, whereas lines a foot apart will seem to do so at a distance of three-quarters of a mile. So far so good. But when he states that lines nine feet apart will appear to meet on the horizon, it becomes evident that his ideas with regard to the horizon are vague. He states in another place that a one-minute angle continued to the visible horizon would gap about nine feet, hence it is apparent that he is thinking of the visible horizon (which plays no part in perspective), and also is under the impression that the visible horizon is at a fixed distance of about five miles, which it is not. The distance of the visible horizon varies very materially with the height of the observer, but in any case it is not the horizon we use in perspective, in which we

consider only the real horizon, which has no distance at all, being merely a horizontal plane level with the eye. The laws of perspective state that all parallel horizontal lines appear to meet on the true horizon, and therefore it fixes only the level of the vanishing-points, not their distance at all. In a perspective-drawing the horizon is represented by a straight line, which represents the trace of the intersection of the true horizon with the plane of the paper. As all parallel horizontal lines appear to meet (or to have vanishing-points) on the level of the horizon, it is evident that they must all be represented on the same line, whereas other parallel lines, which may not be horizontal, come to vanishing-points above or below the horizon line, according as they slope up or down. There is no idea or suggestion in perspective that the various vanishing-points are all at the same distance from the eye, wherefore the whole of the writer's arguments, as far as they are directed against the accepted theories of perspective, are based on a misconception of its principles. All parallel horizontal lines do meet on the horizon, whatever their width, the horizon being merely a horizontal plane, and not a distance.

The author also has a theory that we do not understand, to the effect that "a landscape-photograph taken with a camera having the same angle as the human eye would show the same exact measurement, so that the measured size of an object on the horizon, or anywhere else, would tell its actual measurement and actual distance." This reads as if a camera of an eminently useful type is being proposed, but we are unable to make out its principle. From the context, however, it seems that the author places overmuch reliance on the one-minute angle theory as a basis of measurement. For example, he says that a balloonist, "seeing objects on the earth disappear or reappear, and knowing their dimensions, would know instantly his altitude. A man's hat, for instance, could be seen at an altitude of half a mile. A trolley-track at three and a half miles would just begin to vanish." As a matter of fact, a straight railway track in a level country will have vanished altogether over the visible horizon at two and one-half miles if the observer is standing on the track. If he is higher up, and so can see more of it, the track itself is visible for a very long distance, whereas it becomes impossible to determine the exact point at which the two rails seem to merge into one. If the one-minute angle were an infallible guide, then surely in an oblique view of a pyramid the three visible angles would no longer appear to meet at one point if one side of the pyramid was seen very much foreshortened. Such an effect we have never observed. Two separate lines may appear to merge together when their separation subtends an angle of about one minute, but this mergence does not necessarily involve simultaneous disappearance, so we very much doubt the feasibility of estimating distance or size upon the basis of the one-minute angle theory. It is too difficult to determine the exact moment or point at which two points seem to coalesce, whereas total disappearance must occur at a later period or greater distance.

The well-known disagreeable effects produced in wide-angled photographs, or by taking up too near a view-point, are referred to by our author; but it is clear that these are not due to any fault in the theory of perspective. They are due only to the careless production of results that cannot readily be seen properly, and their perspective is perfectly correct. This is proved by adopting means to obtain a right view-point, and why they are referred to we do not quite understand, as the one-minute angle theory has no apparent bearing upon them.—*British Journal of Photography.*

Beeswax and Resin

A MIXTURE of beeswax and resin has many uses. The two are melted and well stirred together in proportions dependent upon the use to which the compound is to be put. Beeswax is too soft for some purposes, while resin is too brittle. The mixture occupies an intermediate position, and forms a capital compound for making wooden dishes watertight, for attaching the glass to the frame in the case of glass-bottomed dishes, for stopping holes in metal-tanks and dishes due to rust, for sealing corks to make bottles airtight, and for similar objects. Two parts of the wax to one of resin will be found a good proportion for general purposes; but if this is too soft more resin may be added, and *vice versa*.—*Photography.*

An Ideal Print

ONE of the greatest differences between a clever photographer and a mediocre one is that the former sets out to get a certain class of picture, and gets it, whereas the latter, with similar aims, is satisfied with any sort of a decent print, although it may be far removed from the original conception. The fact is that most photographers shirk the labor of systematic experiment, and will not take the trouble to expose a dozen or more plates on one subject to get exactly the quality they seek. It is not necessary to be constantly experimenting, but when it is desirable to produce a certain effect, nothing else will avail. A man may fluke himself into notoriety if he has sufficient sense only to exhibit his successes and to destroy his failures, but he will never produce a distinctive style of his own. The delicate sketch-like effects of Mr. Cadby and the soft rich tones of Crooke are the result of study and not of fortuitous happenings. What man has done man can do, and the young photographer should set up a standard for himself based either upon the work of a better man or evolved from his own artistic consciousness, and strive towards its attainment. Even if it is never attained much valuable experience will have been gained and better work done. Hit-or-miss methods lead neither to artistic nor financial success.

British Journal of Photography.

A Drying-Cupboard

A RATHER novel way to dry negatives and prints is given by I. W. Senior, in *Photography*. "If the photographer's workroom has a disused chimney in it, the construction of a cupboard in which to dry negatives or prints is very simple. All that need be done is to block up the opening altogether except for as large an airway as can be arranged, and connect it with the top of the cupboard; the bottom should have an opening in it as large as the top airway. If the bottom airway is light-trapped and the door of the cupboard is also made light-tight, the cupboard can be used to dry backed plates, plates which have been bathed to make them orthochromatic, etc. When I first made use of such a device, I provided a gas-jet in the upper airway, under the impression that it would be necessary to create sufficient draught, and the airway was furnished with muslin to filter out dust; but both have proved to be unnecessary. There is a strong, steady up-draught in the chimney, as is shown by holding a lighted match against the opening into the cupboard. Negatives placed in it are dried quickly and evenly in three or four hours or less when they are not more than an inch apart in the racks. If they are not so near together, they will be found to dry still more rapidly."



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY



Prints for the Illustrated Press

Most photographers who supply the demands of the illustrated press use developing-out papers of the bromide or gaslight variety. The prints are on a glossy or carbon surface and of a black or gray tone, to suit the individual requirements of each publication. Despite the admitted superiority of this method of procedure, some photographers appear to believe that purple-toned P. O. P. prints are welcomed by art-editors. These photographers burden themselves with much additional trouble to produce the purple-toned P. O. P. prints, and often lose all chance of acceptance by the editors because of the delay to make these unwelcome prints. As already stated, the illustrated press much prefers a soft, yet brilliant, carbon or glossy print in which the black or gray tones are clear. Another point that some photographers overlook is the fact that illustrated publications employ a staff-artist to work up all prints that are to be halftoned; hence, all retouching by the photographer is time wasted. It is admitted that the staff-artist often bedaubes the print in a manner that appears to spell ruin. However, in the finished halftone, it is seen that the staff-artist's efforts have produced the desired effect, and maker and editor rejoice together. At no time in the world's history has a greater opportunity offered itself to the intelligent photographer; but to improve this opportunity he must study the demands of the illustrated press.

Avoiding Reflections in the Lens

An interesting letter by R. M. J., in *Photography* adds some helpful information to the general subject of lens-reflections. He says: "I have read somewhere that a small stop, by reducing the exposure, increases the tendency to fog, from reflections; the reflections remaining bright while the lens was working slowly. My own experience is quite the reverse, as I find that by stopping down to F/16 all reflections from the brass-work of the lens — blackened, of course, but still there are reflections — are cut off. For by putting one eye to where the corner of the plate would come, it is impossible to see anything more than the diaphragm, which being a very thin iris reflects nothing from the edges of its leaves. The only trouble then likely to arise might be from the sun shining on the lens itself; but this can be avoided by shading with the hand. In landscape-work the increased exposure necessitated by the smaller stop is of little harm, though, of course, in snapshot-work it is, and then a lens-hood is handy. But, for instance, when one is using the front very much raised and the camera is turned nearly towards the sun, the hood always seems to cut off something, if it is made to shade the lens from the sun, and it is on such occasions that I have found stopping down most useful. The increased covering-power which the small stop confers is also just what is then likely to be required."

Developing Stale Bromide-Paper

ONE of the contributors to *The Amateur Photographer*, A. J. N., says that, "many workers will find the following method of obtaining bright clean prints on old stale bromide-paper of considerable value. It is not new, but well worth repeating in view of the opportunities

to obtain packets of old paper that frequently occur at sales. Make up a ten percent solution of bromide of potassium and one of cyanide of potassium (very poisonous). Add a drop of each solution to every two ounces of developer, and then make a test by immersing an unexposed strip of the old paper for about thirty seconds. If there is no sign of graying, prints will develop with the same good whites. If any graying, add a little more of each solution and make another trial. Both solutions are restrainers, but they seem to be more effective when combined. In addition, by using them together one gets a degree of restraining that would result in green tones if bromide alone was used, and in yellow whites were only the other employed."

Mildew and Photographs

As is well known, mildew attacks paper, and for its ravages on a print there is no remedy. It is important therefore to keep pictures which we value in such a manner as to reduce the chances of mildew to a minimum, or at any rate not to increase them. Damp is the most favorable condition for the development of these microscopic fungi, and when the spores are present it is surprising how quickly they will develop in damp paper. We have known a batch of platinum-prints which were wetted and then left under pressure in a copying-press, in order that they might dry flat, come out after a few days' interval badly spotted with marks which nothing could remove. For this reason it is well to get prints dry as soon as is conveniently possible; never, for example, pinning them up in a damp dark-room and leaving them hanging there for a week or two. Nothing may happen for a dozen times, but the thirteenth may result in the ruin of a batch of prints. A formalin-bath would destroy any spores there might be in the paper, presumably; but there are always many floating in the air, which would soon settle and do the mischief.—*Photography*.

Making the Most of Every Photograph

Too few workers seem to obtain all there is in a picture. In *The Amateur Photographer* C. L. makes some remarks to the point. "How often in looking over amateur-work one is constrained to say, 'What a pity that man had not the wit to see what a good thing he had got! If he had printed it so and so, and cut it down so, it would have been a gem.' When we have obtained a good subject it is worth bestowing a little time and pains to get a really satisfactory final result. First, we consider the style of paper and the sort of surface which will suit our purpose. We have to all intents and purposes the choice of ordinary silver-paper, probably gelatino-chloride in these days, then matt gelatine-paper, and finally, rough-surface papers; which of these are we to use? In the final operation of mounting and framing there is again large scope for the use of taste and judgment, and it is true to say that a subject can almost be made or marred by the way in which these final arrangements are carried out. The question of trimming down, again, affords the opportunity to use brains, judgment and care, and it is no mean sign of a really intelligent worker that he knows how much of his print to get rid of, how little he can judiciously keep."



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$5.00.

Second Prize: Value \$2.50.

Third Prize: Value \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. ***Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

6. ***Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.***

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

Awards — Beginners' Competition

Closed July 31, 1917

First Prize: Paul F. Hodge.

Second Prize: M. de Leon Imus.

Third Prize: E. L. Austen.

Honorable Mention: John A. Elkins, G. P. Russell, M. H. Schammel, Kenneth D. Smith.

Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

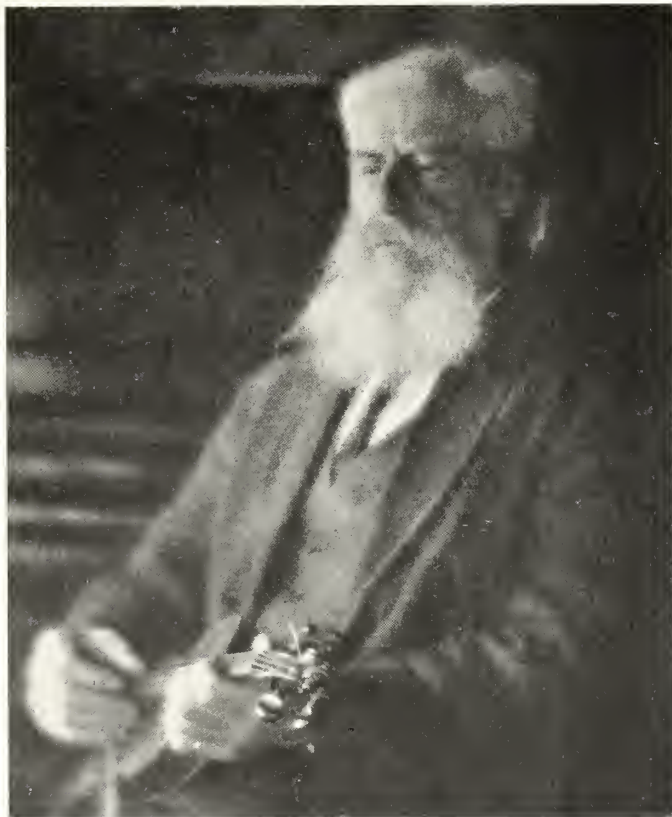
As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

Losing Friends by the Camera

I HOPE sincerely that the reader is not one of those unfortunates who have sacrificed a friendship in an unsuccessful endeavor to make a pleasing likeness. I have heard of cases where the camerist, eager to make a flattering snapshot of an attractive girl or woman acquaintance, failed dismally. Result — what promised to be a pleasant friendship terminated in a permanent coolness. The camerist with inadequate experience should deliberate before making a pretty girl, particularly one who is conscious of her good looks, the subject of a picture. Of course, it is assumed that he has her consent, otherwise misunderstandings are likely to arise, even if the picture turns out to be satisfactory. Many a young and pretty face goes with an undeveloped body, the owner of which naturally shrinks from being "snapped" in her bathing-costume, unless the photographer is sufficiently skilled to moderate unpleasant detail or to produce refined results. — W. A. F.

SECOND PRIZE
BEGINNERS' CONTEST



THE OLD VIOLINIST

M. DE LEON IMUS

displayed — past performances of members. Perhaps a collection of another club is hanging, just received from the print-interchange. Then, pass through a door draped with red curtains into a large workroom, around two sides of it are lockers, wherein members keep their own chemicals and paraphernalia. In the center is a large, long table, at one end of which is the trimming-board of goodly dimensions, at the other end is a retouching-desk, and underneath the table are four large racks to dry prints. To the right are tanks — one shallow and one deep — to wash films, plates and prints. Just in front are graduates of different sizes, trays, hangers for roll-films to dry on, and underneath the shelf one can pin up cut films and on top are racks to dry plates. Every need has been taken into consideration, including scales, stirring-rods, funnels and other accessories too numerous to mention.

Off to one side is the print-room, containing printing-frames of various sizes. Printing is done by electric light and arranged for convenience. The darkroom comes next, with its grated sink and chemicals. There is also a faucet in front to rinse with, and in back lies a shelf to load plateholders.

The enlarging and lantern-slide room, which is equipped and arranged in such a way as to obtain the best results with the least effort, is situated near the darkroom. A Cooper-Hewitt "M" type lamp is used for the work, and with this illumination good results are assured under any weather conditions.

The studio would put many in the professional class to shame. It has a north light on one entire side, with shades and curtains necessary to obtain the many lighting-effects now in vogue. Various backgrounds are at the disposal of the photographer, as well as a 5 x 7 studio-camera with an 8 x 10 back. Numerous lenses, including a Verito Soft-Focus and the usual portrait-lenses, are at the command of members. The rooms are so arranged that they can be thrown into one large hall, which may be used for lantern-slide projection and lectures. Up-to-date camera-clubs appreciate the great educational value of lectures and practical demonstrations. To have the club-rooms so arranged as to accommodate these meetings is fortunate.

If I were to tell you the dues for a year for all these advantages — and I have not mentioned the sociability and help from individual members — you would be amazed at the low charge. I honestly feel that if you would take the time to investigate the advantages of the camera-club in your vicinity you would find one with similar equipment and advantages to the one I have been writing about. A thing most important, that I have failed to speak of, is that almost every camera-club has some particular night designated as "Club-Night," at which time every one interested in the camera is cordially invited to be present. I strongly urge readers to consider my advice carefully and to look into the nearest camera-club.

LOUIS F. BUCHER.



ANSWERS TO QUERIES



Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.

C. H. K.—An Autographic Kodak will use any standard film of the correct size. It does not follow that because your camera is equipped to use an Autographic Film it will not accommodate any other standard roll-film if it is impossible to obtain an Autographic Film. There are several excellent makes of roll-film on the market to-day that are suitable for

the shutter-mechanism. Releases may now be obtained in several lengths to suit nearly all requirements. The efficiency of the wire-release is shown by the fact that most manufacturers now include it with every camera-equipment.

J. G. R.—Red glass, known as "ruby glass," is safe only when it is "copper-flashed." This looks very much like the so-called "gold-flashed" ruby glass, which is decidedly unsafe, as it admits violet and blue rays, to which photographic dryplates are extremely sensitive. For a low price you can buy a safe dark-room-lantern; but in any case be sure that your "ruby glass" is "copper-flashed;" otherwise reject it. Mediums that admit more light than "ruby light" are safe only when the sensitive plates are exposed to these rays indirectly and very briefly.

G. D. V.—To use a Portrait-lens of the Petzval type, focus as described in October PHOTO-ERA, and use as large a stop as will give satisfactory definition.



MORNING SUNLIGHT

EDWARD L. AUSTEN

THIRD PRIZE — BEGINNERS' COMPETITION

this purpose. However, the fact remains that the advantage of recording each exposure on the film, as it is made, can be had only on an Autographic Film.

A. C. Y.—Unless a darkroom is available, a changing-bag is required to load a plate developing-tank. At present, there is no plate-tank on the market that may be loaded in broad daylight. However, a roll-film tank may be loaded safely at any time by using ordinary care and following the very explicit directions.

O. F.—Wire-releases are much preferred to the bulb and tube. With care, a wire-release will last indefinitely, whereas this is not true of a bulb and tube. Moreover, a wire-release does not blow dust into

A Voigtlander lens of this character, having an equivalent focus (not back-focus) of about $10\frac{1}{2}$ inches, should be used on a $6\frac{1}{2} \times 8\frac{1}{2}$ plate, not larger, though experienced professionals stretch the covering-capacity to 8×10 size, using a $1\frac{1}{4}$ -inch stop for a $3\frac{1}{2}$ -inch head, at $\frac{1}{2}$ -second exposure in a strong studio-light, and a $\frac{3}{4}$ -inch stop for a two-row group of four to six persons, at an exposure of about $1\frac{1}{2}$ to 2 seconds.

C. K. J.—Whenever possible, use a small stop in preference to a large one. Even with F/4.5 lenses careful workers rarely use this maximum speed unless obliged to do so. Always consider the larger stops as "emergency-stops" to be used only when a picture may be made in no other way.



PRINT-CRITICISM



Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.

L. R. V. A.—The figure is too large for the space; there should be more space around it. The pose, though possibly natural, is not graceful. The full sunlight, striking the head, neck and hands, is unfortunate, as it creates undesirable and unnatural highlights, and in the ease of the face itself tends to distort the same. Consequently, there is no modeling in face, neck and hands. The picture is underexposed, as a little more exposure would have given more gradation and a degree of softness to the highlights on the figure. The background, composed of foliage and bushes, is spotty and bewildering, although in nature it may have looked very pleasing. The reflected sunlight in the lower right-hand corner also detracts. It might easily have been corrected in the negative.

E. M. A.—Your picture of a house and bridge may have looked very pleasing to the eye when you photographed it; but the group is too far distant to form a good composition. Besides, your point of view was wrong, as the house, bridge and pond form a mass of white spots. Probably the bridge itself, without the house and pond beyond, might have formed a pleasing camera-subject if properly lighted and taken at a proper perspective. Suppose you try it as suggested. This is true of the pond and of other parts of the picture. Your view-point and the desire to include everything in the picture that the eye sees are your chief faults.

E. W. C.—Your picture, "The Hiker," a young woman in man's attire, seems to have only a personal interest, because the model seems to be interested in something that is not manifest. She may possibly be answering back in a pleasant way. Possibly a different title might explain this and excuse the apparently extraneous expression. There is action in the picture and a pleasing background, except that the latter is a little too strongly emphasized to harmonize with the subject properly. The strong light striking the face does not permit good modeling.

O. C.—"Reverie"—the picture of a man in repose holding a violin in his left hand. It seems to suggest a blind violinist, as his eyes appear to be entirely closed. To portray a person in a reverie, it would be much better to direct the eyes into vacancy, and, if looking down, towards an object several feet away from the body. In your case, the person might be regarded as being asleep, or perhaps entirely sightless.

O. C.—"The Belgian Curé" (a profile) is not convincing. The wig, in particular, shows artificiality. The right eye is very weak (no trace of pupil or iris), but could have been managed with much better effect.

J. A. E.—Your picture, which was awarded honorable mention in the Beginners' Competition ending June 30, 1917, is a picturesque subject, but the diffusion seems to be somewhat excessive. The boat is hardly discernible, and, contrary to a well-known art-rule, occupies the center of the picture-area. I do not think that you have done justice to this beautiful scene, although it is very suggestive and imaginative as you have portrayed it and worthy another attempt.

J. H. P.—Regarding your seven portraits —

No. 1: Perhaps another quality of paper would enable you to get a print showing a better color-value of the skin (flesh-tints). This high key does not seem to accord with the original, who appears to be a brunette. Despite the long focus of the lens you used, the nose and mouth appear quite prominent. Unless the lady objects, a view of the face turned a little more to her right would shorten the perspective of the line of the mouth, about which many women are sensitive. The chest (breast-bone) will bear a little retouching. The base of the neck, including the supra-sternal notch, could be slightly modified with benefit; but this must be done with extreme care, including a knowledge of anatomy. Usually this feature is touched out *entirely*, which is wrong.

No. 2: Presumably the same model, and is very good except that the sleeve above the shoulder appears a trifle too near the face — a little too prominent. But why the top of the head should be amputated may require a little explanation. The lighting appears less harsh in this portrait.

No. 3: Effects of over-retouching — the line beneath the lower eyelid is strongly marked in the left eye, but taken out entirely — excessive retouching — in the right eye. The collar on the left shoulder is somewhat prominent. This is not necessary. Otherwise this is a good girl's head.

No. 4: The Oriental physiognomy has been emphasized with undue force. The light striking full upon the nose gives it a downward appearance. The collar on the left shoulder is too prominent and diverts attention from the face, which latter is, also, in too high a key, particularly as the model appears to be a pronounced type of brunette. No offense intended in any of these cases.

No. 5: First-rate, with the exception of the collar, which, by skilful lighting, could be made to appear less obtrusive (please note No. 6 in this connection). The proper inclination of the head might make the nose of this gentleman appear to better advantage.

No. 6: Apparently a very human portrait with hardly any technical shortcomings. The character seems to be well preserved, and what retouching has been done seems to evince good judgment.

No. 7: The same is true here, although in both cases the black or deep-colored necktie does not add to the composition. It is too obtrusive, although it is better than a white or light-tinted one. In this case, the projection of the left ear is a little unfortunate. This feature is handled with better judgment in No. 6. The tonal key is better than in No. 1 and merits praise.

E. C. B.—The picture of the little fisher-boy is very good, except that it is not well spaced. I would suggest experimenting with the print by cutting off, let us say, a slice at the bottom, which will bring the boy away from the center of the picture downward toward the margin. The little boy appears to be quite engrossed in his task, and there is little or no evidence of his being posed. You may also experiment by trimming away the sky, but none away from the right. By placing pieces of paper or cardboard over the picture at top, side and bottom, you can easily determine how you wish the picture to appear ultimately. Technically, the picture is excellent, and there is also good perspective.

D. D.—In your landscape with figures the principal tree is placed plumb in the middle. The sky is without interest and the perspective is not as good as it might be. The picture proper is divided by an unfortunate background — separated entirely from the rest — then follows a narrow black mass, containing a figure which detracts rather than adds to the ensemble.

Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of the time in the table. From 8000 to 12000 feet use $\frac{1}{2}$ of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

*These figures must be increased up to five times if the light is inclined to be yellow or red.	MONTH AND WEATHER																			
	JAN.,					FEB., OCT.					MAR., APR.					MAY, JUNE,				
	NOV., DEC. †					‡					AUG., SEPT. ¶					JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
†Latitude 60° N. multiply by 3; 55° × 2; 52° × 2; 30° × $\frac{3}{4}$. ‡Latitude 60° N. multiply by 2; 55° × 2; 52° × $\frac{1}{2}$; 30° × $\frac{3}{4}$. ¶Latitude 60° N. multiply by $\frac{1}{4}$; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$. §Latitude 60° N. multiply by $\frac{1}{4}$; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$.	HOUR																			
	11 A.M. to	1 P.M.																		
	10-11 A.M. and	1-2 P.M.																		
	9-10 A.M. and	2-3 P.M.																		
	8-9 A.M. and	3-4 P.M.																		
	7-8 A.M. and	4-5 P.M.																		
	6-7 A.M. and	5-6 P.M.																		
	5-6 A.M. and	6-7 P.M.																		

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

SUBJECTS. For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, to glades and under the trees. Wood- interiors not open to the sky. 48 Average indoor-portraits in a well-lighted room, light surroundings.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

For Perpetual Reference

For other stops multiply by the number
in the third column

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

U. S. 1	F/4	× 1/4
U. S. 2	F/5.6	× 1/2
U. S. 2.4	F/6.3	× 5/8
U. S. 3	F/7	× 3/4
U. S. 8	F/11	× 2
U. S. 16	F/16	× 4
U. S. 32	F/22	× 8
U. S. 64	F/32	× 16

Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply $1/16 \times 4 = 1/4$. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. $1/16 \times 1/2 = 1/32$. Hence, the exposure will be 1/32 second.

Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.
Ilford Monarch
Lumière Sigma
Marion Record
Seed Graflex
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.
Anso Speedex Film
Barnet Super-Speed Ortho.
Central Special
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Imperial Special Sensitive
Seed Gilt Edge 30
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.
Barnet Red Seal
Cramer Instantaneous Iso.
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Ilford Zenith
Paget Extra Special Rapid
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.
American
Anso Film, N. C.
Atlas Roll-Film
Barnet Extra Rapid
Barnet Ortho. Extra Rapid
Central Comet
Imperial Non-Filter

Imperial Ortho. Special Sensitive
Kodak N. C. Film
Kodoid
Lumière Film and Blue Label
Marion P. S.
Premo Film-Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso. Speedy
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.
Cramer Banner X
Cramer Isonon
Cramer Spectrum
Defender Ortho.
Defender Ortho., N-II.
Eastman Extra Rapid
Hammer Extra Fast Ortho.
Hammer Non-Halation
Hammer Non-Halation Ortho.
Seed 26x
Seed C. Ortho.
Seed L. Ortho.
Seed Non-Halation
Seed Non-Halation Ortho.
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.
Cramer Anchor

Lumière Ortho. A
Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.
Cramer Medium Iso.
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.
Barnet Medium
Barnet Ortho. Medium
Cramer Trichromatic
Hammer Fast
Ilford Chromatic
Ilford Empress
Seed 23
Stanley Commercial
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.
Cramer Commercial
Hammer Slow
Hammer Slow Ortho.
Wellington Ortho. Process
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.
Cramer Contrast
Cramer Slow Iso.
Cramer Slow Iso. Non-Halation
Ilford Halftone
Ilford Ordinary
Seed Process

Class 100, P. E. 11 Wy. 3, Wa.
Lumière Autochrome



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

A New Photo-Era Contest

MANY of our pictorial contributors evince so high a degree of intelligence in their criticism of pictures in general that, in order to encourage and help develop this valuable faculty, we shall introduce a new competition beginning with this issue. It consists of the reproduction of an excellent photograph, but not perfect in composition. To those who send us the best criticism, before the twentieth of the current month, we shall send, postpaid, a copy of "Pictorial Landscape-Photography," by Paul Lewis Anderson. In the event of several replies being satisfactory, several prizes (the same book), not exceeding three, will be awarded.

The successful replies, not to exceed one hundred and fifty words, together with the picture criticized, will be published on this page in the second succeeding issue.

The subject of composition in landscape-photography is one that interests every camerist. Naturally, more exposures are made of landscapes than of any other outdoor-subject. The main thing to be remembered is the principle of simplicity and harmony. Mr. Anderson is an eminent exponent of pictorial photography in its highest sense, and he has never appeared to better advantage than as the illustrator of his now celebrated work, "Pictorial Landscape Photography." The book is devoted to an exhaustive analysis of the qualities that are necessary to a successful open landscape, in summer or in winter, wide country-road, a view with a stretch of water or to a landscape with a single figure as accessory, as shown in fourteen full-page halftone plates.

Figure-Composition in Landscape

PROSPECTIVE pictorialists desirous to improve their picture-making abilities with reference to a standard work on figure-composition are advised to consult the volume on this subject by Sadakichi Hartmann (Sidney Allen). This is a *de luxe* publication, 7½ x 10½ inches in size, beautifully printed on heavy coated paper, gold top and sides, and illustrated with over 150 halftones (from celebrated paintings and appropriate photographs by well-known pictorialists) and diagrams. This superb volume is from the pen of one of the foremost living art-critics, and is designed to guide amateur photographers to successful efforts in composition of landscapes with and without figures. The work was published, originally, at \$3.00, but PHOTO-ERA procured 150 volumes at a special price, and will sell them to its readers at \$1.50 a copy, sent by express collect, or by parcel-post (consignee's risk), postage according to zone. Each copy, in a neat cardboard box, ready for shipment, weighs 33 ounces.

To Photo-Era Readers

THE Publisher earnestly requests the readers of PHOTO-ERA to give the preference of their patronage to goods and wants advertised in PHOTO-ERA; for no advertisement, whether large or small, is accepted unless it is trustworthy in every respect. This should be of vital importance to all buyers of photographic material, amateur and professional.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE decoration for this number's front-cover is an effective wood-interior, or rather a path in the woods — the work of A. A. Falls. The morning-sun illumines the graceful aisle of Nature's own stately sanctuary, which, later — in full autumnal glory — will surpass the color-creations even of Rheims Cathedral, itself. And what the hand of man fashioned with inspired genius, and which it has demolished with barbaric fury, shall be created and re-created with unceasing regularity. Mr. Fall's performance, though in sombre monochrome, makes an appeal that will receive ready response from every true lover of nature. In execution, this noble composition lacks nothing that could be improved. The print seems to meet the most exacting criticism. The picture is repeated on page 187. Data: September, 1916; 11 A.M.; sun breaking through clouds; Ica Ideal Model A; $6\frac{1}{2}$ x 9 cm.; $3\frac{1}{2}$ -inch Goerz Dagor; stop, F/6.8; no color-screen; 2 seconds; Hammer Ortho, double-coated; pyro-acetone; $6\frac{3}{4}$ x 9 enlargement on Professional Buff Cyko.

It would be difficult for the painter's inspired brush to picture a more finely modeled head and a more expressive countenance of an American Indian princess than has been accomplished by Louis Fleckenstein's camera and which is this month's frontispiece. The young woman seems to bear the grief that presages the doom of her race — the tragedy of the new world. Whatever be the reason that disturbs the soul of Dawsonita, she has won our sympathy and interest, and that is, in itself, a triumph for the artist. Data: studio-portrait; Pinkham & Smith Semi-Achromat; 14-inch focus; full opening; 5 x 7 Central plate; Rodinal; 2 P.M.; indoors; 2 seconds; direct Azo print. Mr. Fleckenstein desires to state that 11 x 14 prints, \$5.00, and 7 x 11 prints, \$3.00, may be obtained through reputable art-dealers or through PHOTO-ERA.

A Photographer of Men, as Pirie MacDonald is known to his patrons, the public and his fellow-artists, is represented, on page 59, against a background of portraits he delights to produce. The posture and expression are eminently characteristic of a man who, though firmly devoted to his profession, has found time to prepare to be a soldier, ready to fight, and ably, too, for his country's honor.

It was in April, 1916, that Charles J. Adams, instructor in a Massachusetts polytechnic institute, gave evidence of rare executive ability as a camerist and author (see his illustrated article "Outdoors with the Kiddies"). After a long interval, he reappears with powers broadened, ennobled — if that were possible — and has chosen as a vehicle of his pictorial expression the diffused method of objective representation. And when a man of his advanced artistic temperament chooses his means of expression with intelligence, the end justifies the means employed. In contemplating Mr. Adams' pictures, one is impressed with the sincerity of his motives, the *con amore* quality of his themes and the convincing mastery of his means of execution. What is so rare in work of this kind. Mr. Adams has contrived and presented with delightful success, and that is the sympathetic unity of his models. A singular incident in connection with his picture of a listening boy, page 178, is the fact that it suggests Jules Breton's famous "Song of the Lark," in which a young peasant-woman, stand-

ing erect in the field, with her face turned toward the sky, listens rapturously to the music of one of Nature's musicians. Data, as Mr. Adams states: "My own preference is a No. 3 Kodak fitted with a Goerz Dagor lens. Almost invariably, I use a plate-back and am especially fond of Seed Non-Halation Ortho plate although I am convinced that almost any plate of the same general qualities is satisfactory in the hands of one who is accustomed to its workings."

James C. Baker is one of the many camerists who have come from afar to the New England coast in quest of subjects. His interpretation of a characteristic scene along the rock-bound coast of Northern Massachusetts, page 181, is eminently fine. Artistic discretion controlled the shutter-speed of his equipment, and imparted a true sense of movement to the agitated waters. The effect obtained is equivalent to realism in the highest degree, and would not be possible in a picture replete with minute details, except as exemplified by a series of motion-pictures. Mr. Baker's portrayal of the seething troubled waters is marked by good values and gradations. Data: July, 5 P.M.; bright light; 4 x 5 Graphic; 7-inch Wollensak Verito; stop, F/4; 5-time color-screen; exposure $\frac{1}{2}$ second; Cramer D.C. Iso Inst. Cramer pyro-acetone; 8 x 10 enlargement on Artura Carbon black, rough matte.

That the selection of a home-made pinhole camera to be used by a six-year old youngster was both wise and practical, is proved by the pictures on page 183. "Landscape" was made with a No. 12 needle-hole, two-minute exposure and against the sun; "Home," with a No. 12 needle-hole, four-minute exposure, light fair; "Portrait," with No. 12 needle-hole, one-minute exposure, bright sun. "Making the Picture," page 184, is of especial value to show a "close up" of the pin-hole camera with which the pictures were made. Mr. Whiting is to be congratulated because of the originality and practical efficiency of this photo-equipment for the purpose intended.

For some years past, Kenneth Hartley has been identified as a successful interpreter of the scenic beauties of the state of Colorado. His views of Pike's Peak are well-known and, as the result of a challenge from a Boston picture-dealer to produce bromide-enlargements of mountain scenery equal in eloquence and power to those made by the Swiss, Mr. Hartley achieved an enlarged print 48 x 60 inches, that is superb in quality and also a steady winner. He tried and succeeded, and, in this respect, stands virtually alone among American professional photographers. He has also made a complete series of pictures of the flora of Colorado (see PHOTO-ERA for June, 1915) of which Kinnikinnick, page 189, is an example.

Mr. Clifton Church, an amateur camerist for a great many years, believes firmly in the use of a large-sized equipment. His choice is an 8 x 10 plate-camera, which, complete with plate-holders and tripod — as carried by him on regular excursions — weighs twenty pounds. Mr. Church jocosely remarks that, when he starts out with the outfit, it weighs about ten pounds, but after having been carried awhile, it seems to weigh a ton. He says that it is a delight and satisfaction to behold his picture reflected on so large a ground-glass surface as 8 x 10, as it can be studied and composed with ease.

He is entirely satisfied with his direct 8 x 10 prints, and enlargement does not enter his head, except for extraneous purposes and then on a very large scale, viz., 22 x 28, of which size several are owned by a hotel-proprietor in Jackson, New Hampshire. The view, "Near Longwood," page 190, is one of an endless number of views that characterize this locality (Riverway) and which I described, briefly, in August PHOTO-ERA. The present scene is marked by a cloudless sky, which, as every pictorialist knows, is a condition generally to be avoided. In the present instance, however, the composition does not seem to insist on the presence of clouds, the suggested cerulean blue of the sky appearing consistent with the delicate, quality of a suggestive spring-picture. Data: April 10, 1917; 11 A.M.; 8 x 10 R. O. Universal View-Camera; Darlot W. A. lens No. 4 (for 10 x 12 to 11 x 14 plate); smallest stop; "B" B. & J. ray-filter; 2 seconds; 8 x 10 L. Ortho; pyro-soda; 8 x 10 direct Azo print.

The readers of my review of Herbert W. Gleason's work "Through the year with Thoreau," in September PHOTO-ERA, will doubtless be interested to see one of the promised illustrations, the first of which appears on page 102. This view is characteristic of the beauty about Lake Walden, not far from Concord, Mass. Although Mr. Gleason modestly disclaims any pictorial intent in preparing the numerous illustrations that adorn that work, he evinces his innate artistic temperament quite convincingly in this charming bit, "Tarbell's Springs." Data: 5 x 7 Century Grand (plate-camera); 8½-inch Goerz lens; stop, F/22; ½ second; Eastman Portrait-Film; M. Q. dev.; 5 x 7 Cyko Glossy print.

Advanced Workers' Competition

THE picture, page 105, to which the second prize in "Landscapes with Figures" has been awarded, stimulates the imagination, for it is filled with suggestion. The theme suits the title, and the beholder is interested in the tired traveler's mind. The man is gazing wistfully in the direction of a comfortable home where he may seek rest and shelter; or he may have other thoughts and be prepared to continue his journey then and there. The road takes a sudden turn and leads to — the traveler may not know whither. The proportions of the picture do not seem secure. The foreground seems a trifle curtailed; then one might wish that the sky were more ample, or that the space back of the principal subject could be abbreviated. Then, too, there appears to be no connecting link between the traveler and the tree, at the right, to complete the suggestion of a possible dwelling beyond. This offers the thought of two points of centralized interest or two pictures which the beholder may easily separate from each other. These somewhat disturbing thoughts do not however, exclude the conviction that the landscape or setting is one of uncommon beauty; that the values have been successfully retained, and that the theme is an eminently worthy one. Moreover, had the sun been shining brightly, the picture might not possess the harmony of tone it so well expresses. Data: September, 4 P.M.; bright light, but no sun; Premo Plate-Camera No. C, 3¼ x 5½; 6½-inch E. K. Co. R. R. lens; at stop F/16; B. & J. 5-time color-screen; ½ second; Cramer Inst. Iso; diluted pyro, in tray; enlargement on P. M. C. Bromide No. 8; Metol-Hydro.

In "Up-Stream," page 197, we have a somewhat uncommon theme, also one in which the intent of the artist is direct and convincing. The hunter seems oblivious to the presence of the camerist — as the model should always be — and fits in admirably with the su-

perbly rendered winter-landscape. Data: March, 1917; at noon; bright sun; in heavy woods; 4 x 5 camera; B. & L. Anastigmat F/6.3; at full aperture; 1½ second; Wellington Extra Speedy plate; pyro-acetone; enlarged from part of negative on Azo Carbon Soft with Cooke lens, using the diffusing adjustment.

Beginners' Competition

THE full beauty of Paul F. Hodge's "Autumn," page 201, is not apparent in the reproduction, as the original was a rich sepia in tone. The subject is not an original one, but the artist has approached it in a new and decidedly artistic fashion. The whole scene teems with vigor and spirit and, though the prominent objects are set off firmly against a spectacular sky, they hang well together and constitute a harvest-scene of exceptional beauty. Data: November 9, 1916; 4 P.M.; bright sun; Eastman Portrait Film; pyro-soda, in tray; R. R. lens; 7½-inch focal length; stop, U. S. 32; 2 seconds; ray-filter; print on P. M. C. No. 8; clouds dodged in Metol-Hydro developer; sepia-toned.

The bearded gentleman fondling a violin, as pictured on page 203, does not appear to deserve to be designated as old, as he seems to be in fine physical vigor. His half-closed eyes seem rather to suggest feeble sight, if not actual blindness. As an indoor portrait, made in the home, the picture has many excellences, the pose being particularly good. Data: Made near a west window, in the forenoon; 5 x 7 plate-camera; 9-inch Verito; stop, F/5.6; 7 seconds; Seed 26; Metol-Hydro; 5 x 7 Artura-print.

The author of "Morning-Sunlight," page 204, has a highly developed artistic appetite, but his love of clear and sparkling definition (characteristic of his that has appeared in these pages) has been gradually giving way in favor of a soft and pleasing delineation as shown in his present landscape. The searching morning-light of a bright July day casts strong shadows but Mr. Austen had it under control and produced a scene of rare power and breadth. As a composition it is well proportioned and balanced. Data: July, 1917; 7.30 A.M.; back-half of B. & L. R. R. lens; 6½-inch lens; stop, U. S. 4; 3-time color-screen; 2 seconds; Cramer Inst. Iso; pyro-acetone; print on Azo E. Normal (Hard); 4 x 5 plate-camera.

The picture offered for general criticism, in our new department, page 208, is by Frederick C. Buchholtz. Data: "Follow Me!"; 9 x 12 cm. Ica; Carl Zeiss Tessar; 13.5 cm. focal length; stop, F/4.5; 3-time ray-filter; August, 5 P.M.; good sunlight; 1/50 second; Standard Orthonon; Rytol; 7 x 10 enlargement.

The Rapid Drying of Negatives

To dry negatives satisfactorily has always been a perplexing problem for those who have to rush their work off at a few hours' notice. Press-photographers, as a rule, avoid the difficulty by making their urgent prints from the wet negatives. This method, of course, is out of the question where a considerable number of prints is wanted. Hot air has often been advocated as the quickest means to dry a negative, but the great drawback to apply heat to a wet emulsion is so well known that the professional is seldom desirous to give the method a trial. It is quite true that a still, hot atmosphere will very soon melt the film, but it is just as true that an even hotter atmosphere, when forced against it by means of an electric blower, dries the negative very quickly without any deteriorating effects.

Professional Photographer



ON THE GROUND-GLASS

WILFRED A. FRENCH



A Resourceful Dealer

I was about to pass the photo-shop, across the way, when I remembered the collection of decorated developing-trays, of midget size, that I saw there several weeks ago. Yielding to a sudden impulse, I entered, and, sure enough, there they were, only more of them. Carefully poising one of the dainty picture-dishes in the palm of my hand, I ventured to ask: "Well; how is the trade in these photo-midgets? Selling any of them?"

"Going like hot cakes. Never sold so many. Besides, they're not photo-trays any more. I'm selling them as ash-trays, pin-trays or for ladies' jewelry — rings, brooches, watches, etc. Here, this long one (3" x 8") is very nice as a cocktail-tray to give your photographic friends. Yes; they are going fine!"

The Mutilation of Proper Names

HAVING had the unpleasant experience to see my baptismal name spelled variously, Wilford, Willard, Wilbur, Welford, Winfred, Milford, and even Wellingford, I always sympathize with the person whose name is mutilated beyond recognition, particularly when that name is a household word, so to speak, and quite simple in form. Admiring the portraits of certain eminent operatic artists in a once familiar periodical (now extinct), a gentleman of my acquaintance was interested to know the name of the photographer. The name that appeared under the reproduction of each portrait was "Geis," an artist of whom my acquaintance had never heard before. In view of the strikingly artistic character of the pictures, he felt justified to make inquiries regarding this man Geis. He communicated with the secretaries of several prominent photographic societies, but none of them knew anything of the mysterious artist. Determined to locate him, if possible, the searcher finally appealed for aid to the Publisher of PHOTO-ERA. It is well that he did, for I recognized the portraits at once as the work of Garo! Indeed, the finest of the set had been published in PHOTO-ERA several years before it appeared in a publication for which Mr. Garo does not seem to entertain a high degree of admiration.

An Unwise Investment

AMONG the many things I frequently am asked to do, and which affords me more pain than pleasure, is to give a candid opinion of a picture that has not one redeeming feature. Instead of anticipated praise, the inquirer receives discouraging criticism, and his hopes to make a living out of photography are dissipated — unless he discards my advice in favor of that of some one else. The case is not dissimilar to a request received recently from an amateur in far-off Saskatchewan, who, for one reason or another, was determined to make motion-picture photography his source of livelihood, and although not blessed with adequate means, he intended to come to Boston to learn the business. His practical knowledge of photography was excessively meager, his education very defective and his financial resources less than one hundred dollars. He had been told that, by coming East and investing his savings in a course of instruction, at the end of a few months he would be an experienced motion-picture operator and

command a weekly salary of at least twenty-five dollars, with all expenses paid. Of course, the expenses of the journey eastward, and of living in a big city, would have to come out of the little nest-egg, and successful results of his tuition could not be assured. I was sorry to inform him of the futility of his plan, and hoped that he would abandon it until he knew more of photography. As assistant to a capable and prosperous motion-picture operator, he would be better off, and perhaps at the end of a year he might be able to start out for himself in his own motion-picture business.

Photographs of Freaks of Nature

CONTRARY to the belief among students of science, photography claims its own Newtons and Franklins. I do not mean the reported success in perpetuating unexpressed human thoughts, materialized spirits or impossible feats of jugglery in the air; but rather achievements in the field of hydrostatics — by representing water *as running uphill*. However, crediting him with a due degree of intelligence, I do not think that the average camerist is serious when he submits photographs to a competition in which a stream or pond is shown to run uphill, or *vice versa*. Nearly every month photographs are submitted in which this alleged natural phenomenon is represented with all graphic abandon. Very frequently, too, the water-line of the ocean is shown to be quite oblique. But for this feature, some pictures would be very satisfactory and have a good chance to win official recognition. Of course, if the camerist so desires, he may trim the print and thus restore the water to its normal level. It is a mystery why this very obvious fault, so easily remedied in the print, is overlooked by camerists who appear to be mentally normal and discriminating.

True Appreciation

COLUMBUS, OHIO, August 7, 1917

MR. WILFRED A. FRENCH, Ph.D.

My dear Sir:

I do thank you most sincerely for the beautiful silver cup you so kindly sent to me as the prize for the competition entitled "Spirit of Spring." The cup is a perfect gem, and the engraving is beautifully done. I like it all very much, and I can't tell you how much I appreciate it. I am so delighted that I accepted the cup instead of the photographic supplies. I have shown the cup to many of my friends, and they all are very much pleased with it.

I have just made another print of the prize-picture and have let Mr. Newton have the cup and picture for his display-window. It was his own wish to have both in his shop-window, "The Capital Camera Shop," this city.

Again thanking you, I remain

Sincerely yours,

NELSON C. D. MARTIN.

Pains of Photography

Recruit up from Country (having himself "look" in his new uniform) — "Lor! Guv'nor, do 'urry up. This 'ere smiling fairly makes my ears ache!"

London Opinion.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



Deceptive Optimism

A FEELING of optimism in times of stress or danger is to be commended. It cheers; it encourages; it comforts. But the spirit of braggadocio — promising much and doing little — in so far as it effects our home-industries, only raises false hopes, and gets us nowhere, besides being unbecoming a large and powerful nation. The problem to find substitutes for commodities that we have been accustomed to procure from abroad, prior to the present European war, has not been solved as satisfactorily as the consumer would wish. To be sure, some manufacturers have promised more than they could fulfil! They have relied on the principle of letting the public be the judge, and as a large part of the public has no critical judgment, the manufacturer generally "gets by" with a product which he claims is just as good as the imported one. That such a procedure does not represent progress in the manufacturing industry, is nothing to him. It is *nearly* as good, and that satisfies him. He is not conscientious in upholding the standard set by the European manufacturer.

In the department of chemicals and dye-stuffs, great activity has prevailed in this country for some time past. The Publisher has hundreds of newspaper-clippings collected during the past two years which show the fictitious and even fraudulent character of numerous plants that have been erected throughout this country for the purpose of making rare colors and dye-stuffs that were to be equivalent of those imported from Europe and impossible to obtain until the war was over and, perhaps, not even then. It was an ideal opportunity to get public attention and support, and, as it is but natural, many are the companies that were started with no intention, or even ability, to manufacture coal-tar products, the process of which has taken experts over fifty years to bring to a state of perfection. Great inventions of another country cannot be perfected and applied overnight. Nevertheless, some of the difficult dyes are being made successfully in the United States; but it may be many years before the present impossible ones will be achieved. Among the several difficult chemicals is one — made exclusively by a firm on the Rhine — which is indispensable in the preparation of color-sensitive film and paper. It is almost impossible to obtain in America even at ten dollars a gram, the current market-price, and for the lack of it a number of valuable inventions are marking time, though ably managed and amply financed.

Now as to optical glass — the kind made exclusively and in several hundred varieties by a celebrated firm in Jena, Germany — the American glass-manufacturers are bending their energies to duplicate even some of the less impossible kinds. The difficulty encountered in its manufacture is a certain refractive index. They may obtain it by accident; but it is imperative to know in advance just what is wanted and just how to produce it. That accounts for the success or failure of so many experiments, also for the cost in time and material expended. The manufacture of this glass, which is the result of many years of calculation, research and genius, is virtually a secret. It is more than a science — it is an art. The *Literary Digest* remarked editorially only a few months ago that the French airmen were restricted in their observations of enemy-positions because their

field-glasses or prism-binoculars were not so powerful as those used by their opponents. This optical superiority on the part of the Germans was due to the high quality of the glass used for the lenses and prisms — doubtless of Jena manufacture. The report states that since the French airmen have been able to provide themselves with field-glasses equal in discerning-power and penetration to those of their enemies, they have accomplished astonishingly great results, as is shown by their capture of important enemy territory. Moral!

It certainly would be unpatriotic, at this time, to appear to underestimate the valuable services that are being rendered this country from every quarter; but to proclaim instances of only partial success in chemical and optical laboratories, as complete industrial triumphs, is harmful. It tends to retard the progress so much needed in one of the most critical periods of the country's history; to stifle invention and research, and to discourage promising talent. Is it not better to be conservative in such matters and let the actual results speak for themselves? If the practice to exaggerate our industrial and scientific achievements is designed to impress and deceive the enemy, it fails utterly. He knows, as has been shown in altogether too many instances much more than he ought about the inner activities of this country, and, certainly, is better informed about the geographical character of strategic points along the Atlantic coast than we give him credit for. Let us, therefore, not underestimate his strength, ingenuity and resourcefulness. In reply to the statement made by some one eager to appear optimistic rather than accurate, that an abundance of optical-glass equal in every respect to some of the best varieties of Schott & Genossen of Jena, is now being reproduced in this country and that it is used by American lens-manufacturers in the construction of the most advanced types of anastigmats, it may be said that, as a matter of fact several well-known American opticians, including one in Boston, are virtually hungering for enough high-grade optical glass to enable them to make certain types of lenses with which to fill long-standing orders. Further, any person interested seriously in the actual present condition of our optical glass, dye and chemical industries, need but consult the experts in the physical departments of our scientific institutions, which are authoritative and thoroughly unprejudiced.

W. A. F.

Germany's Photographic Literature

OUR friends, the enemy, in spite of their present engrossments, are not unmindful of the claims of photographic literature. It is stated on good authority by *The Amateur Photographer* that during the first six months of 1916 there were published in Germany hand-books of photography, a book on pocket-cameras, a photographic encyclopedia, and a book on photography out of doors, as well as a text-book on photographic chemistry by an English author, and one or two works on photo-surveying. In 1915 the works of this class which saw the light were even more numerous, and included a volume on such a detached subject as aquarium-photography and also a history of the daguerreotype in the forties and fifties of the last century.

Photographers for U. S. Army

THE following letter has been received by the department in regard to photographers for the U. S. Army. While this circular relates particularly to still photographers, the Army and Navy both are in need of competent motion-picture photographers:

Address reply to Signal Officer, Eastern Department, 39 Whitehall St., New York City.

HEADQUARTERS EASTERN DEPARTMENT,

Office of the Signal Officer,

Army Building, 39 Whitehall St.,

New York City. 1917

FROM: Signal Officer, Eastern Department.

To:

SUBJECT: Photographers.

1. The Signal Enlisted Reserve Corps of the United States Army is desirous of obtaining a number of experienced field photographers for the photography of military operations.

2. Those who have used view and film cameras are particularly desired as well as developers and assistants.

3. The opportunities for active field service are excellent and the photographic detachments will be with the headquarters of the various divisions and field armies. The work is most interesting and those enlisted for photographic work are rated Sergeants 1st Class, Sergeants, Corporals and Privates 1st Class, according to proficiency. Pay and rank correspond to the Regular Army, and clothing, subsistence, medical attention and quarters are furnished gratis.

4. Communicate with this office if you are interested in this work of vital importance, and arrangements will be made for your examination and enlistment.

CARL F. HARTMANN, Lieut. Col., Signal Corps.

By D. C. Mason, Capt., Signal Corps, U. S. R.

Although the status of motion picture photographers is not at this writing definitely decided, it is likely that those of satisfactory ability will have a rank and pay equal to that of a lieutenant in the Regular Army. Physical examinations for applicants of proven ability will probably not be quite as severe as for other branches of the service. Further information concerning the enlistment of cinematographers may be obtained from Kendall Banning, Committee on Public Information, Washington, D. C.

Photo-Course at Brooklyn Institute

THE Department of Photography of the Brooklyn Institute of Arts and Sciences has engaged the services of Wm. H. Zerbe and the coöperation of Clarence H. White to conduct a course in photography, the same as has been done during the past seven years. This course begins October 4, and ends April 4, 1918, the class to meet the first Thursday evening of each month. There will also be five Saturday afternoons—devoted to studio-work. Further particulars, including cost of tuition, may be obtained by addressing the Brooklyn Institute or Clarence H. White, 230 East 11th Street, New York City.

Herbert Parker Wilcox.

Have You seen Him?

IF any reader can furnish the present address, of Herbert Parker Wilcox, photographer, or knows where he can be found, will he kindly and without delay send this information to his anxious sister, Ruth Wilcox

Stevens, 1125 Washington Avenue, Colorado Springs, Colorado? Mr. Wilcox, a slender man, 38 years old, and about 5 feet 8 inches tall, was in Greenville, Mississippi, until August, 1916; and with the Blockley Studio, Clarksdale, Mississippi, until June, 1917. It is nearly three years since a member of his family has seen him, and he is not aware how urgent is the need of a meeting with his sister.

Photo-Era for the United States Soldiers at the Front

ANY subscriber who desires to send a copy of a current issue of PHOTO-ERA Magazine to a soldier, official or civilian, connected with the United States Expeditionary Forces in Europe, may do this through PHOTO-ERA. He should send us his name and address, and the official designation of unit or organization to which the addressee belongs, and said copy will be sent at once from the office of the publisher, free of charge.

Thus a subscriber may keep his files of PHOTO-ERA unbroken and also have the satisfaction of doing his bit. Moreover, the publisher will be glad to continue to send PHOTO-ERA to the addressee, regularly each month, till-for-bid and at no expense, whatever, to the person making this request. The necessary and correct form of address required is as follows:

Return to

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(Name and address
of sender.)

JOHN SMITH, JR.,

Co. X, INFANTRY

AMERICAN EXPEDITIONARY FORCES.

PHOTO-ERA will do this for you!

P. P. A. of Texas

THE annual convention of the Professional Photographers' Association, of Texas will be held at Houston, Texas, October 9, 10, 11, and 12. A complete and practical program has been arranged which is to include many features of value to professional photographers. The secretary, Felix Raymer, Austin, Texas, will be pleased to furnish particulars.

Eliminating a Cause of Fogging

Fog is a constant danger to the photographer. In *The Amateur Photographer* F. H. B. S. offers a valuable word of advice. "The writer recently had the annoying experience to find that a batch of negatives, obtained by means of a small folding pocket-camera, were hopelessly fogged, owing to light having found its way to the plates when the slide was withdrawn to make the exposure. This happened even when the slide was not pulled right out. It was discovered that this fogging was due to the fact that the strip of plush or velvet provided to prevent this very trouble had become worn and pressed down hard by frequent use. A suitable piece of new material not being available, the following plan—which may be of interest and use to other workers with a similar difficulty—was devised to meet the needs of the case. The plush-strip was detached and a piece of thin card—about $\frac{1}{4}$ of an inch in thickness, not more—was stuck down exactly in the position which the plush had occupied. When this piece of card was secure, the plush-strip was refastened into its place over the card. The very slight difference caused by the addition of the card proved to be an effective remedy, and has obviated a repetition of the trouble."



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

PICTORIAL PHOTOGRAPHY — Its Principles and Practice
By Paul L. Anderson, E. E. Octavo; cloth. 23 photo-illustrations and 35 diagrams. Price, \$2.50 net. Philadelphia and London, J. B. Lippincott Company.

Devotees of soft-focus photography will be interested in a book written on this subject by Paul L. Anderson — the eminent pictorialist, instructor (Clarence H. White School of Photography) and author ("Pictorial Landscape-Photography") — and just published by the J. B. Lippincott Company. The book is entitled, "Pictorial Photography — Its Principles and Practice," and is confined chiefly to the use of several types of soft-focus lenses — Wollensak's "Verito," Pinkham & Smith's "Semi-Achromatic," Spencer's "Port-Land" and Struss' "Pictorial." The illustrations, ostensibly exemplifying the results (diffused definition of objects) obtainable with these uncorrected objectives, are limited to landscape, portraiture and interiors. They are by such well-known workers as Clarence H. White, W. E. Macnaughtan, W. H. Porterfield, Karl Struss, Gertrude Käsebier, Charles Kendall, H. Y. Simmons and Paul L. Anderson, but are mostly small in size and hardly representative of their authors' high artistic reputations. The advanced worker and actual or intending user of a soft-focus lens, of whatever make, will find here the principles of pictorial photography explained for his exclusive benefit — beginning with the usual analysis and use of the various constituents of the photographic camera. Much space is given to a description of the printing-processes dear to the heart of the pictorial worker; viz., Carbon, Multiple Gum, Gum-Platinum, Bromoil and Bromide Enlarging. Two popular methods — Ozobrome and Ozotype — are omitted because the necessary materials are difficult to procure in this country. In his discussion of the various printing-media, he dismisses gaslight-papers as being valuable only to the commercial photographer, the pictorialist finding them of little use, because they lack "absolute permanence and highest esthetic quality."

The closing chapter treats motion-picture photography with clearness and discrimination, although, as far as we know, the requisite objective for either making or projecting is an anastigmat and not an uncorrected lens. The author's statement that the culminating product of cinematography, the photoplay, can never displace the spoken word on the dramatic stage, is epigrammatic and true, and deserves to be reprinted in every influential publication in the country. The text not only interests by the earnestness of the author's conviction, but by the refined and pleasing individuality of his style.

How To Make Portraits

UNDER this title the American Photographic Publishing Co., of Boston, U. S. A., has issued an 8vo book of 62 pages in which the technique of making portraits is described. The author, Frank R. Fraprie, F. R. P. S., has assembled and classified the various methods of lighting — daylight and artificial — development, printing and enlarging, and included the

latest studio-apparatus calculated to yield the best results. Numerous diagrams show the position of sitter, light-source and camera for studio and at-home portraiture. The artistic side of portraiture is not touched upon. The book is 50 cents in cloth-binding; paper-covers, 25 cents.

A Book for Picture-Lovers

A HANDY pocket-size "Picture-Dictionary" has been issued by J. Sawtelle Ford, of Chicago, U. S. A., and will find rapid favor among all picture-lovers desirous to know about the best-known pictures of the world. The little 12mo volume consists of five parts, each devoted to a full description, location, authorship, etc., of one hundred masterpieces in painting. Every person of refinement has copies of at least several celebrated works of art with whose history he may not be familiar and which is often a source of embarrassment to him. Mr. Sawtelle's little book will then be found of ready assistance. Price, in cloth, \$1.00, from its publisher or with PHOTO-ERA for one year, \$2.30.

The Best Book on Retouching

MOST of the books that treat on retouching and working on the negatives, with the intention to improve them, are very incomplete and unsatisfactory. Everybody interested has been looking for the ideal book on this important subject, and, considering the opinions expressed by expert professional photographers, PHOTO-ERA takes pleasure in recommending, to professionals as well as to amateurs, the best book on this subject printed in the English language. We refer to the work, "A Complete Treatise on Artistic Retouching, Modeling and Etching," by Clara Weisman — an expert retoucher and, for many years, the head of the retouching-department of one of the largest photographic establishments in this country. The author is by training, experience and temperament well-fitted to treat so difficult a subject as retouching; and admirably, indeed, has she performed her task. Not only does she set forth, at once clear and concise, the principles of sane retouching and their application, but how to avoid the common error of spoiling a likeness and its anatomical aspect by senseless manipulations. She demonstrates the importance of truth in modeling the human face, and illustrates by means of examples the danger of falsifying the results of the lens. On the other hand, there are numerous delightful illustrations of genre and portrait-photography, exemplifying the best principles of the retouching-art which make for the artistic blending of truth and ideality. The author also illustrates how successfully an expression of gloom may be converted into one of happiness, and how other modifications on the negative may be effected by skillful use of pencil and etching-knife, urging only such technical manipulations as may be successfully practised by the retoucher of average ability, her one thought being the attainment of supremely artistic results by easy and sensible methods.

Although the author is a practical artist and a recognized authority in her specialty, she supports her advice with references to well-known art-principles, thus imparting to her words greater value and force. The closing chapter, "Style and Individuality," reveals the author's familiarity with the works of the great painters, and worthily terminates a volume that should be in the hands of every practical worker — professional or amateur. We accord it our heartiest endorsement.

The book is fully illustrated and only a few copies are left. It was published at \$2.50, but will soon be out of print. Copies will be sent by the Publisher of PHOTO-ERA on receipt of \$2.00 each.



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



Patent No. 1,237,342, on process for Producing Color-Printing Plates has been granted to Lee P. Hynes, Chicago, Ill., in which the following is claimed: The herein described process of making engravers' plates, which comprises producing a halftone negative of a picture, producing a silhouette of any desired portion of the picture, making a negative of said silhouette, thus making a negative silhouette with opaque and transparent portions, superposing said negative silhouette upon the said half-tone negative, and then printing therefrom onto the engraver's plate.

Automatic Film-Control has been invented by Homer H. Heckman, of Freeport, Ill., patent No. 1,237,333. The patentee claims as follows: A camera including a shutter, shutter operating mechanism, hand-pressure means to actuate said mechanism, a casing independent of the camera-housing said hand-means, and means carried by said casing to control the exposure-character of said shutter.

Albert M. Schoenberg, of Spokane, Wash., has invented Cut-Film Holder, patent No. 1,237,562, in which the following is claimed: A cut-film holder comprising a frame, spring-tension members fixedly secured to opposite sides of the frame and within the scope thereof, inwardly-extended film-retaining members carried by said tension-members, spring-clips mounted in pairs on said retaining-members, and adjusting-means to adjust said tension-members with respect to frame.

Patent No. 1,237,657, on Photographic Developing-Apparatus, has been invented by Robert Kroedel, Rochester, N. Y. The patentee claims as follows: A roll-film developing-apparatus embodying a support having two parallel, looped guides adapted to receive the opposite edges of a doubled film-strip.

Henry J. Gaisman, New York, N. Y., has invented Method of and Means to produce designations of photographically sensitive elements, patent No. 1,238,504, in which the following is claimed: A new article of manufacture comprising a flexible photographically sensitized-film having an opaque protecting cover thereon, said cover comprising a plurality of superimposed translucent sheets, one of said sheets having a displaceable coating facing the other cover sheet.

Photographic Shutter, Patent No. 1,238,422 has been invented by Paul J. Marks, Rochester, N. Y. The patentee claims as follows: In a photographic shutter, the combination with a blade-mechanism, of a spring operatively connected with the blades and a master-member adapted to actuate the blades in one direction through the medium of the spring and to positively actuate them in the other direction.

"The Largest Photograph in the World"

ACCORDING to a writer in the *British Journal of Photography*, "The largest photograph in the world" has been well and truly boomed in the lay-press and more or less accurate technical details have been given to the public, who gaze and wonder at the possibilities of photography. The latest "largest photograph," it need hardly be said, is that now hanging at the exhibition of Canadian war photographs at the Grafton Galleries, an enlargement made from a 5 by 4 negative, and measuring 20 by 11 feet, depicting the Canadian oper-

ations at Vimy Ridge.

Enlargements have increased in size with that of bromide paper, and the *British Journal* in 1892 tells us of a photograph, "said to be the largest in the world;" this masterpiece measured 7 by 3½ feet, and depicted Miss Ada Rehan, the actress, in her impersonation of "Rosalind;" it was the work of M. Walery, of London. By a curious coincidence, another paragraph on the very same page tells of a large panoramic picture, 48 inches long, made by Mr. Carbutt, who was hoping to produce one 75 inches, or even more, in length.

The spring of 1904 saw the monster enlargement, of German origin, exhibited in London by the Rotary Company. It was a view of the Bay of Naples, and although on one piece of paper, 39 by 5 feet, it was a combination picture made from six whole plate negatives, the joins being cleverly hidden, apparently by a lot of faking or brush work; indeed, a photograph showing three artists with brushes, mahlsticks, and palettes, at work on the enlargement, was reproduced on page 205 of the 1904 *Photogram*. This, no doubt, remains the largest combination-picture ever made upon one piece of paper.

At the same time there appeared another monster photograph of a different type, a panorama of the Alps, measuring 70 by 7 feet, made by joining up, without any sign of a join, eight separate enlargements from as many negatives, a performance no one has yet attempted to rival, and probably will not, as such pictures are of little use.

A Makeshift Focusing-Screen

ONE cannot know too many good substitutes for a broken ground-glass. R. M. F., in *The Amateur Photographer*, adds another to the list. "Various substitutes for a broken ground-glass focusing-screen have been noted from time to time, most of them more or less elaborate, and generally in adopting them we find that some important element is not to hand. As a makeshift for a broken ground-glass screen on an old field-camera, the writer recently tried the following, and though it cannot be claimed that the substitute is superior or even equal to the commercial acid-etched ground-glass, or that it is particularly well suited to fine focusing, it has the undoubted advantage that the two parts will be at hand. They consist simply of a sheet of clean glass of the same size as the broken screen—an old cleaned-off negative will do admirably—and also a sheet of grease-proof kitchen-paper. To use, the paper is cut to the size of the broken screen and laid into the frame; the glass is laid over, and the fasteners turned to hold it in position."

Pouring Without Spilling

A GLASS rod can be used with almost the same result as a funnel when it is necessary to pour a liquid into a comparatively small vessel. To do this the rod is dipped into the liquid, and then held almost vertically with its end where the liquid is to flow. The mouth of the bottle is brought against the rod and the bottle tilted up, when the liquid will travel down the rod without any tendency to spill.—*Photography*.



LONDON LETTER



WE have had occasion in several of our recent letters to record the fact that the energies of amateur-photographers in this country have been almost entirely diverted by the war. Many have dropped photography altogether, and have been absorbed into one or other of the services. Others have found photographic employment under the Government, applying their knowledge of the craft in ways and for purposes that are certainly new to them. Again, others have devoted themselves to the work of the Snapshots-from-Home League, or have used their photography for the benefit of the Red Cross or some war charity. Consequently, it is small wonder that we have little to record of the ordinary pre-war photographic doings. Almost nothing is happening in the old sense, but in reality much, indeed, is going on; experiences are being gained in many new ways of life by photographers, and mostly through their knowledge of photography. We should fail in our duty as chroniclers if we did not emphasize this point. It is more far-reaching and important than any other photographic factor, altering permanently the outlook and habits of many people. An extract or two from a letter, just received, may help to illustrate what we have been trying to describe.

Before the war the writer (a woman) was a regular exhibitor at the Salon and R. P. S., spending much time working in oil and gum, and producing very successful studies of children. For the last six months she has turned her talent to account professionally, the proceeds going to a war-fund. She writes:

"Although I feel that I have worked like a trooper the last six months, my nervous system still remains intact. I am getting the babies of the district gradually into my net, and have made nearly £100 since I began."

That shows what she is doing; but the next paragraph is interesting as throwing light on the point of view of the artist versus the parent:

"All this would be fairly satisfactory were it not for the horrible fact that the parent's choice is never the photographer's choice, and that if one wants to make money one dare not experiment or go for anything but the pretty and the ordinary!"

All those who have taken up professional portrait-work know how true this last sentence is. Photographic portraiture would be an ideal occupation if the sitter could be persuaded that what the artist considers his best picture is the best portrait! But our correspondent goes on to console herself with the reflection that "however unpleasant it is to photograph a smile, it is better than stitching bandages, or getting a backache in a hospital." The point of view of the professional on such undertakings no doubt would put a different complexion on them, and were it not a war-time, and, let us hope, an ephemeral business, there would be much to be said for it, as the public is always ready enough to spend money on teas, entertainments, or even photography, if it is assured that the proceeds will benefit a war-fund.

Mr. Walter Barnett's exhibition of portraits at Knightsbridge was sure to attract attention. As its name ("Warriors All") implies, it is a collection of photographs of soldiers, many of whom are at the front. All the "warriors" look strong and hardy, with plenty of character and anatomy showing in their faces, and one rejoices that such a well-known professional as Mr. Barnett is considerably modifying the use of retouching. There is a little lack of variety in this show, and a certain sameness in the lighting and backgrounds

— either quite light or dark. One also grew a little tired of the direct, full-bodied pose: both shoulders exactly even, and the buttons in the middle of the picture. We were tactless enough to remark to the kind lady who showed us around that we wished some of the sitters had not presented such a rigid front to the camera, and had allowed themselves to be a little more easy and natural. "But, surely," she replied, "you would not wish a soldier to have an artistic photograph!" with a most scornful emphasis on the adjective. We murmured apologetically that, no doubt, she was right, and probably the "hand-at-attention" attitude suited military subjects.

Just across the road, at Knightsbridge, is Mrs. Marion Neilson's new studio, and we went in to see what she was doing. If one craves artistic photography one is sure to find it here, only that the word "artistic" has fallen into so great disrepute that one would hesitate so to label Mrs. Neilson's clever and distinguished work. She had had a run of children, and we were shown the proofs of charming youngsters whose happy moments seemed to have been caught in their own nurseries. "And are you going to send to the Salon?" we asked; but with this new studio and the one in Bond Street running at the same time, Mrs. Neilson gave a reply that left us in doubt.

We wonder if the Grafton Gallery has ever had a more popular exhibition than that of the second Canadian Official War-Photographs now being held. It is certainly a triumph for photography that it is able to attract such crowds.

On view there is the much-advertised gigantic photograph, said to be the largest in the world, of the Canadians storming Vimy Ridge. The press has boomed this picture, and advertisements of it have been rather misleading, so that one of us expected to see life-sized figures fighting their way up a precipitous hill! With this mental vision, it is perhaps a little disappointing, for the figures are not nearly life-size, the ground looks flat and all is low in tone and naturally rather under-exposed. However, when one has once rid oneself of the stupidly imagined picture, this photograph is quite sensational enough. The more we look at it the more it gets hold of us, until we, too, seem right in the thick of the fight. To give this vision of what it is like, right up at the front, is a splendid achievement of the camera. We are given a glimpse of an heroic deed which will live in history.

It is said that in the making of these photographs Captain Ivor Castle, the official photographer, risked his life again and again, and when one sees "The Storming of Vimy Ridge" one cannot doubt his self-sacrifice and courage.

Around the walls of the first room are life-size heads of Germans, probably prisoners. They are bromide enlargements very cleverly colored, and the effect is lifelike and startling. They are hung "on the line" and stare at us in an uncanny manner. A fair Teuton boy smiles us almost out of countenance, and when we turn away, almost embarrassed, we come face to face with a learned-looking professor in "feld-grau," with a three days' growth of beard on his chin. There is the stolid looking "Dreijährige," also the educated "Einjährlige," and although each face is remarkably different in build and features, with expressions varying from a broad grin to a savage-looking scowl, they all have a typically German appearance.

Although there are no horrors in this exhibition, the darker side of war is depicted. We see the dead being carried, the wounded being picked up, the Red Cross train starting, etc. The lighter side also has its place, and we are shown plenty of Tommies simply reveling in all kinds of odd baths; round corrugated-iron affairs

or what look like tea-chests, the bather wears the same sort of seraphic grin in each. "Shorter, Please," is the title of a photograph of hair-cutting, or rather shearing, where the head is already so closely shaved that "shorter, please," is quite impossible. "A Fine Hunting-Morning" shows the sportsman intent on his game; but his preserves happen to be his shirt, which he has stripped off his shoulders!

In spite of its being August, the exhibition was crowded; but then London is never empty now, even in the dog-days. Many of the visitors were Canadians, and might have stepped straight out of the photographs; no wonder they were so interested in them!

With reference to a note in this column, some months back, it may be of interest to record the announcement of the Press-Bureau that in future, "where military circumstances admit of the grant of limited facilities to photograph hostile aircraft brought to earth in the United Kingdom, and other objects of naval or military importance, preferential permission will be given to approved press-photographers."

Speaking of permits, Mr. A. L. Coburn seems to be a traveling depository of them. He is now staying at the coast in Wales, and has made it his business to get every sort of permission for an alien to photograph that it is possible to obtain. But as is so often the way, when the thing is within reach it becomes worthless, and now this Peter Pan of Photography, who refuses to grow up, is enthusiastically painting Futurist pictures!

CARINE AND WILL CADBY.

No Credit Now To Make Good Pictures

SOMETIMES I feel like protesting. Photography is getting altogether too simple. It is really a crime the way all the sporting-chances have been eliminated.

Why, years ago when you had made an exposure, it was possible to get up a little bet on the result. You never knew absolutely that you were going to have a picture. There were lots of mean things that might happen to frustrate your purpose unbeknown to you, and a real photograph, clean and clear, was a triumph to boast of. It got you a reputation. But not now. No; any old fool can make a photograph nowadays, and you have to go in for composition and separation of planes and other highbrow stuff to keep up in front where people will notice you, at all.

Think what it was like—back in the days when they were just beginning to use dryplates. A photographer could n't telegraph for a gross of any plates of a familiar brand, receive them a day or two later, and then go ahead and pop everything in sight in perfect confidence of his results. Not much. He had to send off to a distant stock-house for a bottle of dry-plate-emulsion and flow it over the plates himself. Sometimes, it was fast emulsion and sometimes it was slow; he could n't always be sure beforehand. There was always a sporting-chance to lend excitement. And sometimes the summer-sunlight would get into the emulsion before it reached him. It meant something to be a photographer in those days.

A fellow could make a fortune out of photography in those days, too. There was Stanley, who got sick of waiting for his emulsion to be shipped away up into Maine and decided to make it for himself instead, until he had such a nice dryplate-business that the big guns in the business came along and took it off his hands for a few hundred thousand, more or less, leaving him free to go into the making of automobiles and violins. It makes my blood boil sometimes, thinking what I missed by not being born twenty-five or thirty years sooner. But all the big things in photography

have now been invented, so that we can neither make a fortune out of it nor have any of the old-time excitement in attempting to make a picture.

I remember my first camera, which had a lens that worked at a maximum speed of about F/32. If you stood on the beach at noon in the middle of summer on a cloudless day, you could get an excellent snapshot; but at all other times you had to make time-exposures. If there were trees and bushes in the view, you had to watch to see that the wind did n't blow so as to make them look fuzzy; and if there were figures, you had to freeze them into rigidity with a hypnotic stare or else strap them down. When you had been through the ordeal of making a few pictures—that is, exposures, for they did n't always turn out to be pictures—you felt as if you had been through the family-wringer and had to take a swig of something cool and invigorating to restore the vital spark. And, of course, it was pretty nearly as bad for those that were photographed.

Now all that is changed. Lenses are so fast that making snapshots is dead easy. You can do it any time. You can steal up on the subject unawares, you can even catch him on the run. Sometimes you have to, when he has seen you first. And you don't have any of the old-time developing-excitement, either. There always used to be a chance about the chemicals; but there is n't any more. And how one misses the old curly film that had to be soaked in glycerine to make it lie flat—Life does n't seem the same without that dear old film, which would roll up into a cylinder just as you went to clamp down the back of the printing-frame.

And then there used to be all that pleasant winter-evening work of cutting masks for different sizes of pictures, so that you could leave out the parts of the picture you were ashamed of, and the delightfully stimulating problem of getting a good print from a negative that proved to have been made on the bias, with the water running up hill. Alas, patent printing-frames and printers have eliminated all that by supplying a neat little set of adjustable masks that do the business in the twinkling of an eye.

But the saddest thing of all is this range-finder. When every other sporting-chance had been turned into a dead certainty, there was always the one last hope that you might possibly make a mistake in focusing. Now not even that is allowed. The range-finder tells you whether your focus is correct before you make the picture. It used to be a triumph to get the focus right; now it is a misdemeanor, punishable by a fine or imprisonment, or both, to get it wrong. Photography is getting altogether too accurate and simple.

The Intensifier.

Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher of PHOTO-ERA.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.



CONSIDERING the price of paper, shoe-manufacturers will soon have to go back to leather in making cheap shoes.—*Exchange.*



WITH THE TRADE



How to Make Wet-Plate Negatives

A VALUABLE handbook, "Collodion and the Making of Wet-Plate Negatives for Photo-Engraving work," has been issued recently by the Eastman Kodak Company. It contains the very latest information with regard to manipulating the wet-plate, formulas and suggestions how to avoid technical difficulties. Particular attention is called to the Eastman service which is gratis to photo-engravers, employers and workmen. Copies of the handbook will be mailed to all those interested in the subject.

The New York Camera Exchange

THE permanent success of the New York Camera-Exchange—one of the oldest firms in the business to-day—is due, in the main, to the unremitting, individual and painstaking zeal of the proprietor, Mr. J. H. Andrews. By personal attention to every phase of his business, he has evolved an efficient selling-organization that gives real service. The stock of cameras, lenses and photo-accessories is one of the largest in the United States. The used-camera and exchange-department is noted for its fair dealing, and those who desire to make a "camera-trade" may do so with the utmost confidence in the integrity of its well-known proprietor.

"When Good Fellows Get Together"

IT is more than likely that some of the photographic business-ventures, successful or otherwise, have been inspired by the Burson stories, which have been running in PHOTO-ERA for some time. An enterprise well begun, and likely to prosper, is that of Peck, Croe and Brodie, high-class photo-finishers, 1101 Elmwood Avenue, Buffalo, N. Y. All three are successful pictorialists and technical experts, and are bent on doing only strictly superior work, and at reasonable prices. Their circular (folder) is a model of clearness of statement and good taste. It spells success. Everybody send for one without delay!

New Bass Camera-Catalog

THE new catalog "A Thousand and One Camera-Bargains," issued by the Bass Camera Co., 109 North Dearborn St., Chicago, is of practical value to every amateur and professional worker. Many new and used camera-equipments, also standard photo-accessories, are listed at attractive prices. A new idea in camera-catalog compiling is introduced in the accessory-section where all articles are listed alphabetically, thus making the list self-indexing. The firm states that its policy of fair dealing will be maintained rigidly in all its transactions with camera-buyers. The catalog will be mailed free of charge to PHOTO-ERA readers.

Kathol Developer

THE war has been responsible, directly and indirectly, for the manufacture of many new developers. Kathol was the first of these to be invented and manufactured by an American chemist, Dr. Charles J. Thatcher. For two years this developer has been tested exhaust-

ively by the entire photographic fraternity. To-day it is considered a standard product. Enlarged and improved manufacturing facilities now enable the makers of Kathol to place this popular product in improved form on the market and at a reasonable price. Photographers owe it to themselves to give this American-made developer their attention.

Devoe Photo-Oil-Colors

Now that vacation-days are over and camerists are busily engaged in making prints from their negatives, the subject of coloring some of these pictures is of serious interest. The long-established and unquestioned excellence of the Devoe Photo-Oil-Colors merits the confidence of discriminating workers. Further particulars may be obtained from Devoe & Reynolds Co.,

Making Money With the Camera

IN the current issue of "Photo-Miniature," No. 163, every person using a camera, professionally or semi-professionally, may find at least one way to make it pay. In this little volume—for sale by any photo-dealer—forty-six pages are devoted to about a dozen ideas, plans and methods by any one of which he can add \$100 to \$2,000 a year to his income with very little effort—virtually spare-time work. Moreover, there is the actual fact or experience behind every idea or assertion given in this useful issue of "Photo-Miniature"—the most practical of the series, so far. It will interest every camera-user desirous to make a dollar, for it touches his heart, which is in his pocket. Price, twenty-five cents.

On the Doorstep

MISS ETHEL SMYTH, Radiographic Center, XIIIth Region, France, addresses to the *Daily Mail* the following letter: "Sir,—The director here has just received, via Switzerland, an offer from a leading German firm whose radiographic plates, he says, were the best and cheapest on the pre-war market, namely, to supply at once an unlimited quantity of material at *less than half the price quoted in France or elsewhere*—a rate which obviously ignores profit." If this is a fact, it would seem to indicate an activity in the German photographic industries as daring as it is unsuspected.

Specialists Wanted

THOSE who present themselves with cards from the forestry service, and who are qualified, may enlist at the army recruiting stations for the period of the emergency in the Tenth Engineers, regular army, according to an order received at the local army station from Washington. Information has also been received that a number of new field and telegraph battalions of the regular army are being organized. The men desired are cable, telegraph and radio operators, inside and outside wiremen, electricians, machinists, photographers and men familiar with the construction and maintenance of telephone systems.



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To Contributors: Contributions relating to photography in any and all of its branches are solicited and will receive our most careful consideration. While not accepting responsibility for unrequested manuscripts, we will endeavor to return them, if not available, provided return-postage is enclosed. Authors are recommended to retain copies.

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"HURRY UP, DADDY!"
IRA D. SCHWARZ



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No. 5

Concerning the Lens-Hood

JAMES THOMSON

HE lens-shade, or lens-hood as some call it, for some reason difficult to understand, has had small vogue among camerists in this country. To a multitude of camera-users the appliance is unknown, and in any event, with a good many, is deemed a superfluity, although, as a matter of fact, no worker of serious purpose should be without it. In any circumstance, the shade is useful; and when the direct rays of the sun beat down upon the camera-front, its employment becomes imperatively necessary. More especially is some sort of lens-shade necessary when, as not infrequently is the case, the lens is mounted in a shallow cell, thus bringing it almost flush with the camera-front. Under such a condition it follows, of course, that the lens is exposed to the broad glare of day. Consider, then, the immense amount of entirely superfluous light impinging upon the objective. Whether in sun or in shade, the light is excessive and harmful to results. Fend off all such needless illumination by the simple expedient of attaching to the camera-front a tunnel-shaped hood. I venture to declare that by such simple means a great improvement in product will ensue. The boundaries which the ground-glass focusing-screen reveals are indicative of the whole extent of the illumination required to impress adequately the picture upon the sensitive surface of the plate. All light otherwise, top, bottom and sides, should be fended off, to the certain betterment of the finished product.

Some of our most artistic effects are had by working against the light. This runs counter to what we were once taught by so-called experts, who advised against making views other than with the light from behind and oblique. Whoever advanced such dicta originally undoubtedly had regard for the teachings of the art-school, where, in drawing, the light is supposed to come from over the left shoulder, all shadows falling to the right. However, recent successes in artis-

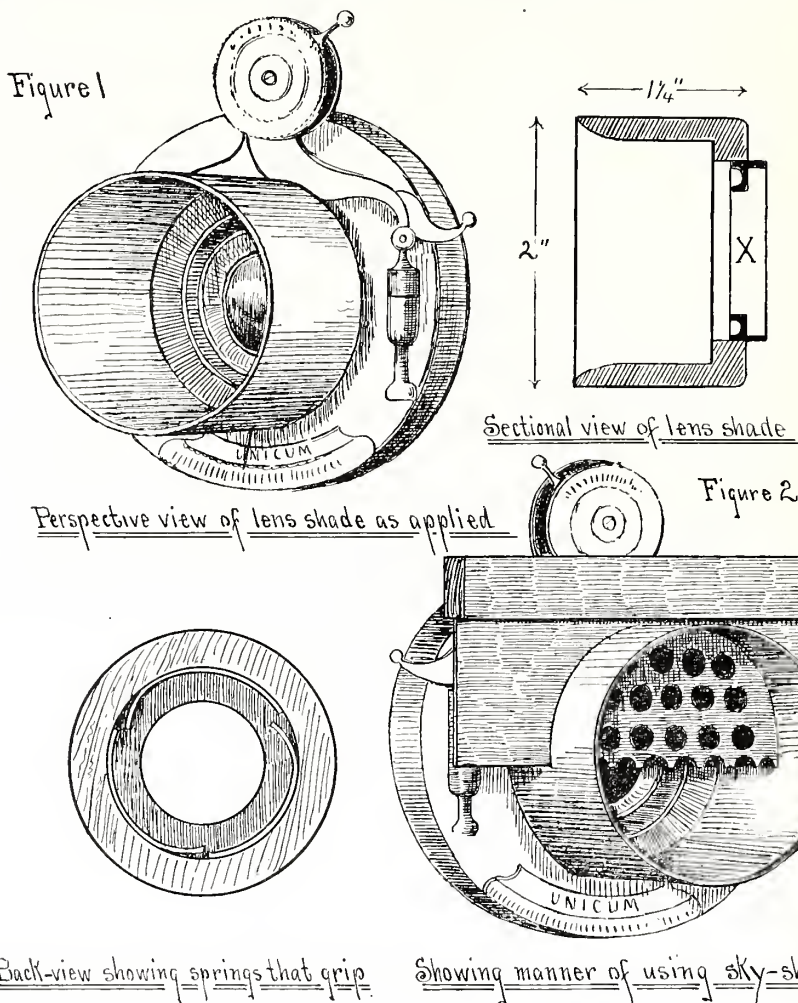
tic photography have shown that the light may fall on the subject from any direction. By the use of the lens-shade, photographing can be done with the sun well in front of the camera; but whether or no such is the case, in ordinary circumstances the damage of fog and flattening is lessened by the use of the shade.

Some manage to work against the light by getting the trunk of a tree between the lens and sun. I have known some to intercept direct sun-rays by using a hat or a holder-slide. All very well, but there have been times when part of the view has been cut off inadvertently by such makeshift-methods as the last. The one certain method is the use of a hood, supplemented by hat or slide when deemed necessary; and, indeed, there are circumstances where all such expedients in combination are useful if not absolutely necessary. Personally, I got along for years without a shade, nor deemed it a necessary device. But when I began to take views along the Boston waterfront, I soon found that my efforts at picture-making were very greatly hampered. My hand-camera, along with plates and other impedimenta, I am accustomed to carry in a green bag such as is affected by lawyers. My desire was to rig up some sort of lens-hood that would take up little space, something that could be instantly put on and taken off. The wooden shade delineated in Figure 1 answers my every need and has the added advantage to enable me, when needs demand, to make use of a sky-shade after the manner of that shown in Figure 2. Here, then, is a lens-hood and sky-shade in combination — simple, light in weight and costing but a trifle.

The lens-shade, shown in the lower section of Figure 3, is made in two sizes. For telephoto-work two shades are joined. The smaller size measures when closed $3\frac{1}{2} \times 3 \times \frac{7}{8}$ inches, the large size $4\frac{1}{2} \times 3\frac{1}{2} \times \frac{7}{8}$ inches. The shade shown in the upper section of Figure 3 one could make readily one's self. The hood of leather can be rolled up easily when not in use; but it would serve equally

well if arranged to fold. In Figure 4 we have delineated a simple lens-hood of aluminum. It is a British pattern having, I believe, great vogue over on the other side. As may be seen, in design it very much resembles our traveler's drinking-cup. In "The American Annual of Photography" John Boyd draws attention to the

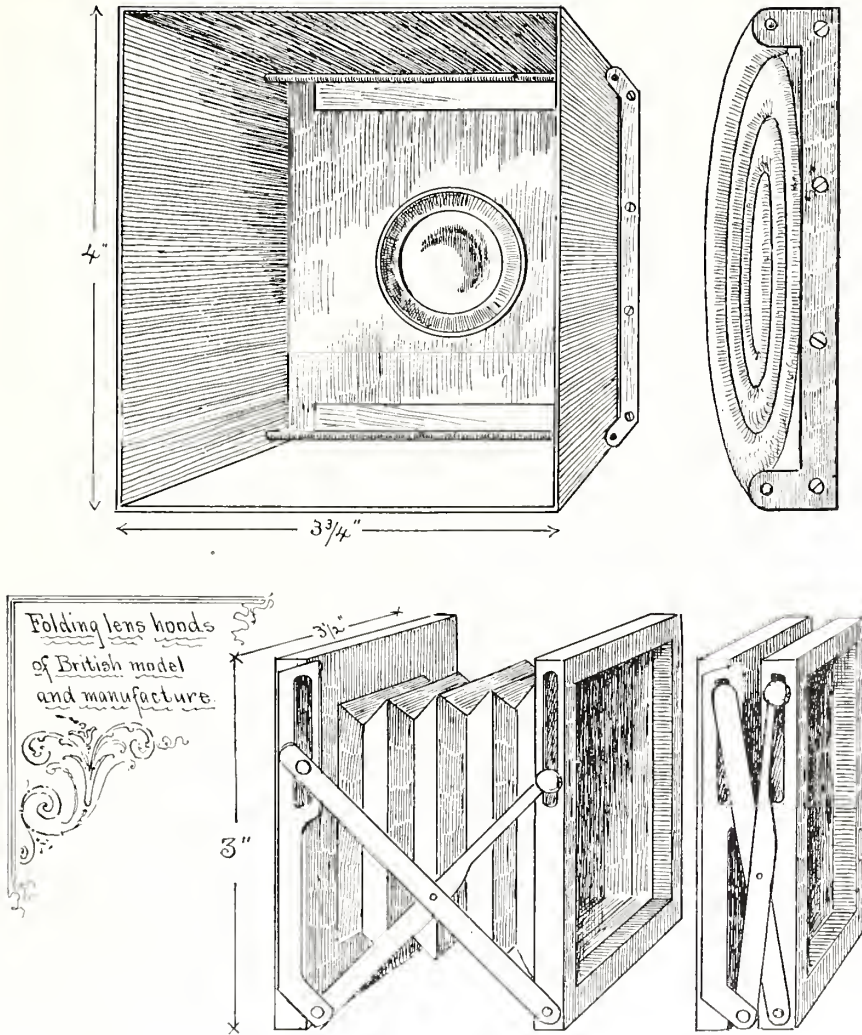
the cup and fit the next section to go over your lens. Should this be too large, stick passepartout-binding inside until you make it the right size." With all respect for Mr. Boyd's directions, I beg to differ with him *with regard to removing the bottom*. The bottom keeps the various sections together, and when removed the whole thing



fact that at the cost of ten cents, and a little personal effort in the way of labor, one may provide easily a shade of similar shape and principle. "Go to any ten-cent store," he remarks "and buy one of those portable drinking-cups made of tin or aluminum. They are fabricated, in fact, from thin aluminum that can be cut easily with ordinary shears. They are made in several sizes—I have found but one—and can be gotten usually to fit any ordinary lens. Select one whose second section from the bottom is the size of your lens or larger. Remove the bottom section of

falls apart. My idea is that to fit such a cup to 4 x 5 and 5 x 7 lens-cells, leave the bottom on, but cut a hole in it slightly larger than required. Spring a thin strip of cork, leather or rubber—cut just big enough to go around the lens-cell—into the hole cut in the cup's bottom. This should project a little, so as to set off the bottom of the cup from the shuttle-mechanism. Passepartout-binding may be depended upon to attach the lining to the inside of the cup. Coat the inside of the cup with black Japan or analogous lusterless varnish. Neatly effected, this will

Figure 3



yield a collapsible hood at minimum cost, though equal to an English model ten times as expensive. This model is depicted in Figure 7.

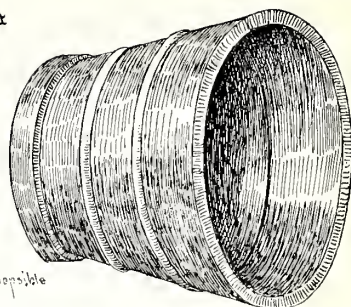
To Mr. John Boyd is due the idea involved in the shade shown in Figures 8 and 9. In the 1917 issue of "The American Annual of Photography" we are indebted for a description of this lens-shade, which gives promise to be as practically useful as it certainly is simple in conception and inexpensive. Fashioned from a stiff piece of leather — Mr. Boyd suggests that it be $\frac{1}{16}$ inch in thickness — it can be carried in the pocket, and when about to be put to practical purpose all the worker has to do is to roll up to a cone-shape and snap together the glove-fasteners with which it is provided. As shown in

the accompanying diagram, it is designed for a 4 x 5 camera having a lens-cell $1\frac{1}{2}$ inch in diameter. For any size larger, it is a simple matter to make a trial shade as a preliminary with a sheet of stiff paper. The greater the diameter of the lens-tube, the larger, of course, must be the circle. The shade shown in Figure 1 was made from the lower section of a wooden container in which gold paint is marketed. From any similar cylindrical wooden object — suitable as to dimensions — a useful shade can be fashioned. The lens-shade here shown is adaptable up to and including the 5 x 7 size camera.

For some years my shade with a cork-lining at the lens-end, to set it off from interfering with the shutter-mechanism, served my every need.

But having by accident broken a supplementary lens, I made a new shade, fitting in it, in the manner shown in diagram, the metallic casing from the broken lens. That part with a cross in the diaphragm represents this cell, the remaining portions being wood. Here we have a lens-shade, simple, easy to make, of small bulk and of ready application. It can be slipped instantly on or off and can be carried in the coat-pocket. The cost of the gold paint, from the wooden container of which the shade was made, was but twenty-five cents. Any similar wooden cylinder of hollow construction and size suitable, however, can be made to render a like service. It is necessary only to make the proper-sized hole in the bottom, to cut off as much of the object as is needed, to line the lens-end with cork, felt, leather or rubber, to the end that it may fit snugly as well as being set off a trifle from the shutter-mechanism. Finish by staining black — black ink will do — and coating the outside with shellac. My first

Figure 4



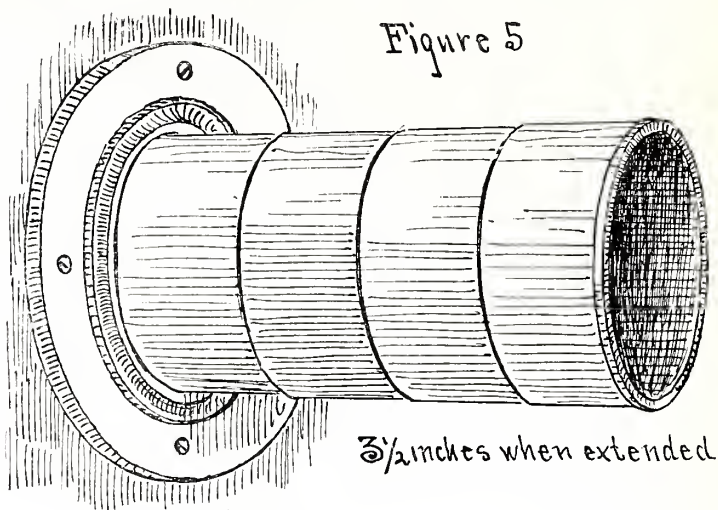
Colloidal

An English model an article of commerce on the other side.

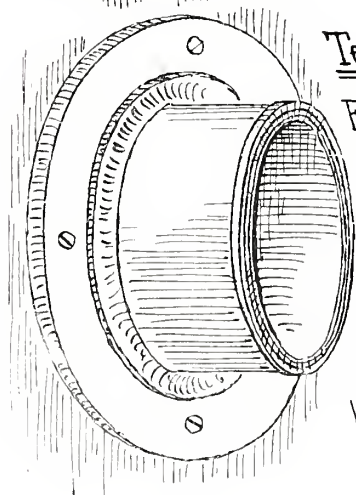
attempt to construct a similar shade was with a section of a pasteboard mailing-tube. It served well enough but got crushed easily, hence the resort to something along similar lines that would stand hard usage and be portable and efficient.

The sky-shade, shown in one of the diagrams,

Figure 5



3 1/2 inches when extended



1 inch when closed

Telescopic Aluminum Lens-Hood
For Which Idea We Are Indebted
To T.W.Kilmer, Esq.,

is made from a portion of a pressboard holder-slide. Holes are punched in it in the manner shown. Sawing a slit half way through the lens-shade provides just space enough in which to insert the sky-shade. The purpose of the latter may be explained as follows: In a correctly exposed out-of-doors view, the sky is usually very much overtimed, the result being that clouds sometimes so beautifully present to the vision are totally eliminated because of overexposure. By using the sky-shade after the manner shown, abundance of time may be accorded the land or water without at the same time overtiming the sky. A little experimenting may be necessary to determine the precise amount of light to let through. Focus the view in the usual way, then insert sky-shade to cover the sky. Should a first attempt result in too much of the sky being covered, raise the shade in following exposures. Regulate position of the sky-shade by the amount of sky-space in the composition.

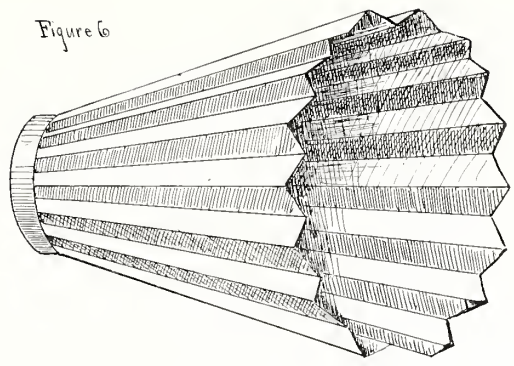
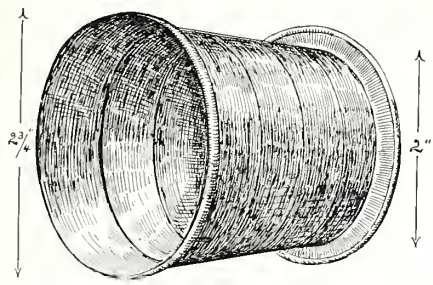


Figure 6
Folding Lens-Shade made of pleated leather

describing the unsatisfactory nature of paste-board-shades he had tried, he continues: "I finally hit upon the collapsible hood which is herein illustrated (shown in Figure 5). I had this hood made of four aluminum rings, each ring measuring one inch in length. These rings fit one within the other. They are dull black on the inside, and slight ridges break up any rays of reflected light. When this hood is extended it measures $3\frac{1}{2}$ inches." Dr. Kilmer's lens being of a ten-inch focal length, it will stand so long a tube; but for a lens of less focal capacity half the length would serve. The advantage of this model is to be found in the fact that when closed it may remain on the camera-front, ready for immediate use.

In Figure 6 we have a folding shade made of pleated leather. It is one thing to exploit lens-hoods and quite another — so far as this country is concerned — to direct intending purchasers to sources where they are likely to be had. In the British Isles they are comparatively common, the more pretentious of those herewith illustrated being from that quarter. Dealers in this country have failed to list the lens-hood for the good and sufficient reason that the call for it has

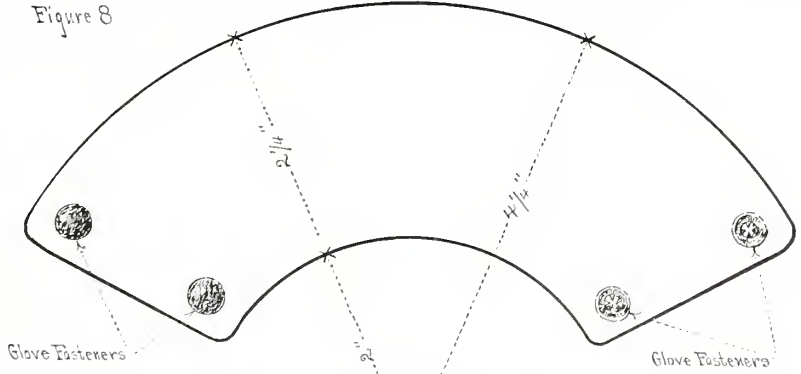
Figure 7



A telescopic aluminum drinking-cup costing but a dime can easily be altered so as to make an excellent lens hood.

In the 1912 issue of "The American Annual of Photography" there is described and illustrated an excellent lens-hood of the collapsible order. Dr. T. W. Kilmer is the originator of it, and after

Figure 8

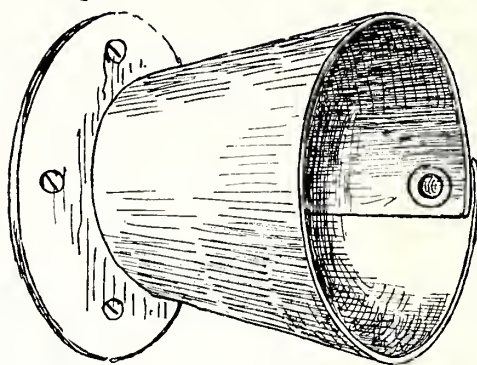


Pocket lens shade made of heavy leather.
Ready to use when ends are joined and snapped.

been neither frequent nor insistent. Some twelve years ago there was a very efficient lens-hood on the market called the Nicholson, but so far as I have been able to ascertain, it is not now to be had at photographic supply stores.

But what one cannot buy readily one may, in some sort of fashion, make for one's self. The simpler forms submitted herewith are not difficult to make and cost but little. Or we may profit by the example of Dr. Kilmer — where something of a pretentious order is desired — and have the article made to special order by some competent artificer. The shorter the focal length of the lens the greater the need of the hood. For this reason for the hand-camera the lens-hood is indicated especially. For the motion-picture camera, too, where a lens of very short focal capacity is brought into play frequently the hood is needed, nor is there any good reason why it should not be employed even with objectives of long focus. In snow- marine- and mountain-photography the value of the lens-hood is inestimable. Should attempt be made to escape fogging by cutting

Figure 9



Leather lens shade ready to use.
For detail see figure 8

down the dimensions of the aperture, it is at the sacrifice of atmosphere and aerial perspective.

Photographic Lens-Names

THE study of nomenclature seems to reveal human nature at the lowest depth of banality. Walk down a suburban street and read the names of the houses — the multitudes of Eastleighs, Bellevues, Lyndenes, etc.; look at the advertisement columns with their Stickphast, Cakeoma, Unceda, etc., and it seems that originality and interest in modern names is impossible. Now, the photographic lens is the product of mathematical ingenuity and skilful workmanship; is it to be dubbed with such a name as "Snapkwik"? Fortunately, things are not quite so bad as that, though the limit is approached in some much-used names. By the help of the Greek and Latin languages manufacturers seem to hope to give dignity to their products, so that what would sound bald as "Rapid" or "Speedy" is considered euphonious as "Celor." Apart from such names, a few will be found of interest through their association with their use of construction or history.

Roughly, lenses may be classified as named from, first, their real or supposed optical properties; second, their construction; third, some relationship expressed to light; fourth, their use; fifth, some person connected with their design or manufacture.

In the first class we may start with the word

anastigmat. This is formed from the Greek prefix *an* (meaning not) and *astigmat*, which itself is formed from the same negative prefix, and *stigma* (a point). Thus, "astigmat" means not giving a correct image of points, and anastigmat means not giving an astigmatic image. It is obvious that the two negative prefixes cancel one another and may be suppressed, thus forming the word "stigmatic," which means the same as anastigmatic. By adding adjectival prefixes, we get such names as *Aristostigmat* (best stigmatic), *Holostigmat* (completely stigmatic), *Iso-stigmat* (equally stigmatic, i.e., throughout its field), *Orthostigmat* (i.e., also free of distortion — Greek *orthos* — correct), *Telostigmat* (rapid), *Neostigmat* (a new kind of stigmatic lens), *Planastigmat* (flat field); other words having the same significance as anastigmat are *Collinear* (i.e., the lens renders the object correctly line for line), whence, of course, *Linear* and *Homocentric* (rendering the object point for point). A "telephoto" lens is one that can be used for distant objects (Greek *tele* — far). A combination of the last two words into *Telecentric* implies a telephoto-lens of anastigmat type. *Bis-telar* gives *twice* the size of image an ordinary lens with some camera-extension gives, while *Magnar* expresses the general telephoto-property of giving a *large* image.

Other names express particular properties.

For instance, for a wide-angle lens you take the Greek *eurus* — wide, and combine it thus: *Euryplan* (*plan* — flat or Latin *planus*), *Eurnar*, *Euryscope* (*skopeo* — I see), *Eurygraph* (*grapho* — I write). Or you take the Greek *gonos* — angle — and form *Hypergon* (*hyper* — exceeding), and *Tetragonal* (*teras* — wonder). Similarly, *Perigraphic* (*peri* — around). Another desired property is flatness of field, denoted by *plan* — *Periplan*, *Aristoplan*, *Planor*, *Triplan* (consisting of three lenses), *Planastigmat*. Freedom of distortion is expressed by the Greek *orthos*, or Latin *rectum* — straight, so we get *Satzorthare* and *Doppelorthar* (convertible lenses), *Rectilinear* and *Rectoscop* (this last a hybrid word, combining the Latin with the Greek *skopeo* — I see); *Althar* (Greek *alethes* — true) implies a similar property.

Universality is expressed by the Greek *poly* (many) and *pan* (all), as in *Polynar*, *Polyplast*, *Polycentric*; *Pantar*, *Pantogonal*, and *Pantoscop*; *Omnar* is from the Latin *omnis* — all. Aperture or rapidity of action is expressed in *Celor* (Latin — quick), *Xpres*, *Hypar*, and *Fulmenar* (Latin *fulmen* — lightning). Finally, there is the most interesting name of all in this class — *Primo-plane*, designed by the most original of English opticians, Mr. Dennis Taylor. Its name implies that it satisfies the mathematical condition for bringing the lines, in what is known as the "primary plane" flat, to a high degree.

The above-named class contains the greatest number of lens-names, most of which hardly rise above banality; and I should like humbly to suggest to the manufacturers of future lenses that it should be considered as closed. All the possible changes seem to have been rung on a restricted number of Greek and Latin words. There is more hope in the second class, which includes *Tessar* (Greek *tessares* — four, because four lenses go to make the complete system), *Triotar*, *Trio*, and *Triplane* (which have three), *Spharostigmat* (presumably because the surfaces are spherical), *Dasykar* (Greek *dasus* — thick, because the lenses are thick — not a great recommendation), *Unofocal* (all four constituent lenses have the same focal length, convergent or divergent — a most interesting name to the theorist), and *Unar* (German *un* — dissimilar — an unsymmetrical combination).

Glankar, *Leukar*, and *Phaos* are all Greek words expressing brightness, and typify another class of name, which also includes *Syrius* (sparkling), *Claron* (Latin *clarus* — clear), *Oxy*s and *Oxyu* (Greek *oxus* — keen), *Eikonar* (Greek *eikon* — an image), and words containing *Heli* (Greek *Helios* — the sun), as *Heliar*, *Heliogonol*, *Heliorthare*, *Helimar*, and *Heliographic*.

Lenses named from the uses to which they are

or may be put include *Aviar* (made for the Royal Flying Corps), *Combinable*, and *Kinor* (for cinematographic work).

The *Aldis*, *Cooke*, *Ernon* (Ernemann), *Graf*, and *Turner-Reich* are named after their inventors or makers.

Other names which command attention are the *Artar* (Greek *artios* — perfect), *Dynar* (Greek *dynamis* — power), *Isconar* (Greek *iskono* — to make like, implying correct image formation). The *Protar* (Greek *protos* — first) was the first anastigmat lens designed by Dr. Rudolph, of Jena. The *Goerz Dagor* is formed from the initials of its original name, Doppel Anastigmat Goerz, with the addition of a suffix, and *Dogmar* is similarly formed.

There is a host of other names in which the method, if not the reason, is discernible, as *Cosmos* (the world), *Nebular* (clouds), *Sylvar*, *Acroplan*, and *Stellar* (star), and still others which afford no external clues. I will mention only a few which are most intriguing — *Syntor*, *Serrac*, *Adon*, *Amatar*, *Carfac*, *Dialyt*, and *Hecklar*. Perhaps there are some readers who can furnish a clue or exercise their ingenuity on them.

If we examine the desirable features of a lens name, it should, first, be short; second, sound well; third, have some connection with the lens, avoiding as far as possible trite Greek and Latin derivatives. The analysis above shows examples of what to avoid, and furnishes a few good specimens. It may be some consolation to know that the majority of the cacophonous and bombastic names in the list are of German lenses which are little likely to be heard of in this country again, and it is seen that the makers that show lack of originality in the name show as great a lack in the design; in fact, the name is often the only original thing about the lens. Avoiding the pitfalls mentioned, we may name our lens after, first, its inventor or maker; second, some interesting point in its history or use. Good examples of names formed on these lines are the *Aldis*, *Cooke*, *Aviar*, *Tessar*, *Protar*, and *Dagor*. It so happens that these comprise most of the important original lens-forms. If optical properties are to be brought in, it should be seen that these are such as may be justly claimed, and not savor too strongly of the luckster; optical perfection is a thing to be striven after, but never obtained; the optician, therefore, should not tolerate a name that implies a perfection that no lens can attain. Descriptive names, such as *Portrait*, *Process*, *Wide Angle*, *Double-focus*, etc., or a series number, may be used to differentiate lenses of a similar type, but different apertures, etc., in order to avoid the multiplication of fancy names.

British Journal of Photography.



WHEN a painter uses the term "drawing" with reference to his canvas it is understood generally to mean the form or skeleton upon which his picture is built. This outline may or may not have actual existence in the shape of penciled lines. In fact, very frequently, it obtains nowhere save in the imagination of the artist. Of course this latter condition is wholly true with reference to photography, where no penciling is possible. The general term "drawing," although including in its scope the fundamentals of balance, perspective and unity, is vitally concerned further with a fourth qualification, without which no picture can be wholly successful. This refers to the principle of form.

A composition may fulfil the requirements of balance, may realize unity, may satisfy perspective; yet if the configuration is unfortunate it is not a great picture. A very young artist once answered some friendly criticism from Cellini by saying: "But I drew them exactly as they were." "Ah," said the great master, "but why perpetuate these, when there are so many beautiful things in the world!" All things have their good and bad sides. People will present their best one to the observer, but inanimate objects are denied this privilege. It becomes, therefore, the duty of the true artist to seek it.

A case in point may serve to emphasize the need of care in this respect. Recently, a prominent metropolitan resident desired some photographs of his magnificent country-place. The artist (?) sent to make the pictures returned with some elegantly finished photographs, and, after some hesitation, the magnate paid the rather stiff price asked; but he was vaguely dissatisfied with the transaction. Shortly afterwards, chancing to entertain a retired landscape-painter of considerable note, he exhibited the views to him with a request for an opinion of them. The artist gazed at them silently, for a time, and re-

quested his host to excuse him from expressing an opinion until he had seen the premises. The next day a visit was paid to the estate, and at its conclusion the artist handed his host a memorandum, with the suggestion that he give it to his photographer. He did so, with the result that, shortly afterward, he received a new set of views with which he was highly delighted, the more so as there was a note accompanying the pictures with the words: "No charge, and thanks for the tips."

Possibly a copy of the famous artist's notes will be instructive as well as amusing.

"Memo. re Photographs of Country-Estate of Mr. Blank.

"Trade that wide-angle lens for one of soft-focus, if you have none at present."

"The facade would bear less resemblance to a sanitarium if a little of the surrounding foliage were included."

"Cows are very useful and kindly animals, but they are hardly of sufficient decorative effect as foreground features."

"The detail of brick-joints in the garden-view is a marvel; but a little atmosphere would be more restful to the eyes."

"An architectural subject is taken best in full sunlight."

"A little composition is more to be desired than much detail."

"The view presented from the garden-gate is worthy of note, even though it does not present the entire view of the house."

"Try the little winding-path from the grape-arbor. It is beautiful."

Unquestionably, the prime requisite for a successful picture is that it shall be pleasing to the eye. Now, a picture may possess gorgeous tone, exquisite balance and a splendid unity, and still fail to satisfy the principal artistic requirement of sheer beauty, through the unfortunate "drawing" of its lines and masses. Here the



GOODRICH FALLS, JACKSON, N. H.

GEORGE D. FORD

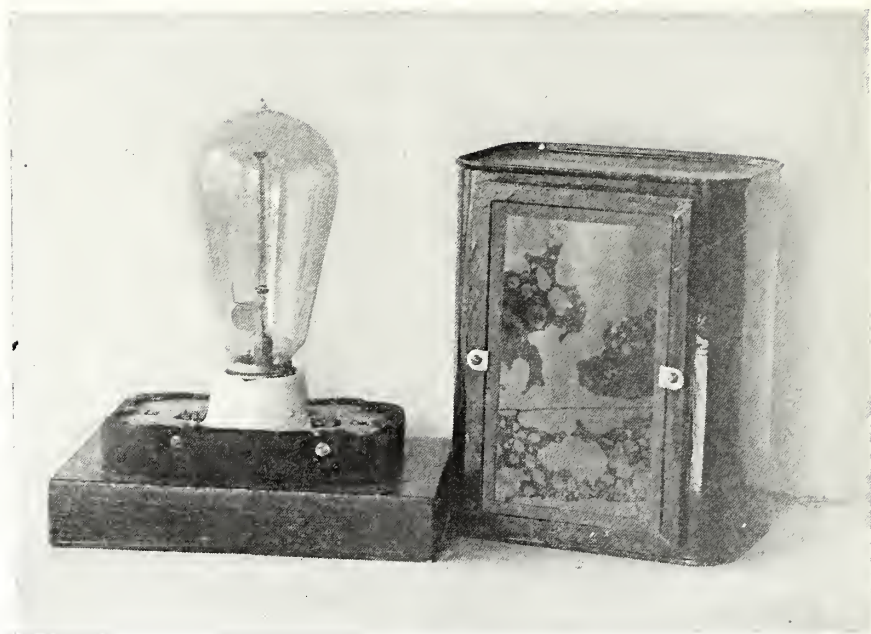
artist must fall back on his innate sense of the beautiful, reinforced by years of training, and select, from the wealth of material offered, those forms which lend themselves best to artistic portrayal. We need not scheme to "improve on nature." Nature requires no reformation at our hands; but forms change in relation to their proximity to other forms, and the line which may satisfy the eye in a region of mountains will appear rough and heavy on a level plain. Naturally, the question arises as to how the mind may best be trained to recognize forms which are inherently beautiful. Each must find his own personal stimulus in that branch of beauty which appeals most to his finer nature. The drama, music, literature, painting, sculpture — all are but varying forms of the great Harmony which prevails throughout nature's universe.

Personally, music furnishes the greatest stimulant to harmonious creation, and a point may be taken from this realm to illustrate the need of cultivating the sense of the artistic. The other evening a record of the "Sword-Song," from "Siegfried," was brought home and played. None of us liked it. We could see no beauty in the heavy chords and massive themes of Wagner's stupendous creation. Nevertheless, the harmony lingered, and from sheer reminiscence we were forced to re-obtain the record which at the time

was rejected. The experience was a distinct gain in artistic perception — an inspiration by which to profit. And so it is that the artistic eye, as well as the artistic ear, requires cultivation; and any study of the beautiful — no matter in what sphere — is profitable in this respect.

Recently, a very pronounced disciple of "things as they are" was taken to task for his inflexibility with regard to his hobby. "Nature is art," he cried, and refused to budge. Notwithstanding, he grew peeved after a recent competition wherein a fellow-craftsman carried off the honors with a carefully composed and studied view of the identical grove he had chosen for his own entry. He has since been seen with many volumes of treatises on composition, beneath his arm, and we have much hope of his future work.

A careful study of the compositions of the old masters will serve as inspiration; but, after all, experience is the real teacher and if it is coupled with intelligent and helpful criticism, it cannot fail to produce results. "The picture's the thing," to paraphrase the old saying, and he who follows all rules in the book, and still fails to attain the crucial note of sheer beauty is not an artist. He is merely a workman and deserves no place among the galaxy of those who make the world a more beautiful place in which to live by their faculty of artistic expression.



SAFELIGHT WITH TOP REMOVED

CHAS. G. STRUBE, JR.

An Efficient and Inexpensive Safelight

CHARLES G. STRUBE, JR.



NEAT, efficient safelight may be made by any one by putting in a few hours' spare time and at an outlay of about a half dollar. As Wesson oil-cans are readily obtainable anywhere in the United States, I shall give measurements and directions for construction of the safelight shown in the accompanying illustrations.

The shell of the lamp is composed of a quart-size Wesson oil-can. The top is cut out as closely as possible and the rough edge hammered down. The can should be well washed in strong soap-suds to remove all traces of the oil. An opening 3 x 5 inches is cut in one side. This may be done easily by running the can over a board held firmly in a vise and cutting with a fairly broad chisel. It is well to have the edges of this cut hammered down smoothly or a leakage of light may result.

The base is cut 4 x 6 inches out of one-inch stock. On this is fastened a half-inch block shaped to fit loosely into the can. Around the edge of this block a strip of velvet is glued to shut in the light effectively. A plain porcelain-base receptacle is screwed to this base and the con-

nection-cord is run through the block and to the edge of the base proper in grooves.

A wooden frame $3\frac{1}{2} \times 5\frac{1}{2}$ is made with rabbet to hold a $2\frac{7}{8} \times 4\frac{7}{8}$ inch glass and deep enough to hold two sheets of glass. This frame is attached to the shell by means of small bolts and nuts, or, better, by small screws driven from the inside. This may be done by punching holes in the tin and driving the screws with a small, thin piece of metal held between the thumb and index-finger.

The base and shell are then given two or three coats of red enamel. A small fifteen-cent can will do for several articles.

A sheet of orange celluloid is bound between two sheets of glass $2\frac{7}{8} \times 4\frac{7}{8}$ inches and fastened into the frame by two metal-tabs held down by screws. If preferred, a single sheet of orange glass may be put in the frame. An advantage of this method of mounting is that glasses may be quickly and easily changed.

A twenty-five watt mazda lamp will give ample light for most purposes. For film and plates the white globe is changed for a ruby globe. If the maker possesses no ruby globe, he will do well to fit a ruby glass into a wooden frame that

will fit snugly over the frame on the light, as, at present, ruby globes are rather expensive.

Different colors and shades of celluloid may be made by dyeing unexposed sections of film that have been fixed or film that has been bleached in common Easter-egg dye. Before using a color-unit, it should always be tested by exposing a piece of the sensitized material to the action of the light for at least as long a time as any of it shall be subjected to the light during manipulation. If fog shows, use a darker shade or a different color.

With a few hours' work even a novice with tools can make a neat and efficient safelight comparing very favorably with the commercial product.

[In view of the questionable safety of the mediums used in many home-made safelights, it may be well to caution readers desirous to adopt Mr. Strube's advice to exercise the utmost care in selecting their mediums, whether glass, paper or fabric. Orange post-office paper has been found to be perfectly safe (non-actinic), also cheap and easily procurable. Orange glass is safer than yellow. If the sensitive material to be manipulated is not highly sensitive — bromide paper and lantern-slides — one thickness of either medium will prove sufficient, provided the light behind it is not too brilliant. For super-sensitive films or plates, ruby glass or ruby fabric is preferable; but here it is necessary to select the kind known as "copper-flashed." The "gold-flashed" variety should be rejected, *as it is not safe*. Holding the medium against the sun or an



SAFELIGHT ASSEMBLED

CHAS. G. STRUBE, JR.

electric lamp, and applying a pocket-spectroscope, one may observe the presence or absence of violet or blue rays, which are disastrous to ultra-rapid or color-sensitive plates or films. A *safe* safelight is imperative.—EDITOR.]

Completing the Group

FRANCIS M. WESTON, JR.



OU boys bunch together there, and let's get a picture of the crowd before we break camp."

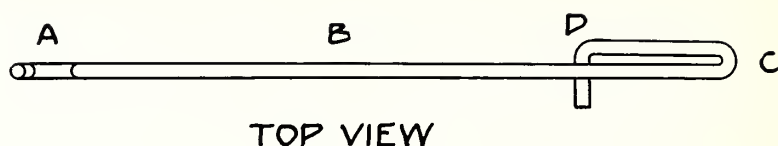
"Suppose you let me make it so that you can be in it," says another.

The result is that a lot of time is wasted and two photographs are taken, neither of which shows all of the members of the group. As records, these pictures are inaccurate and, as album-reminders of a pleasant trip, neither is complete. The matter merited attention.

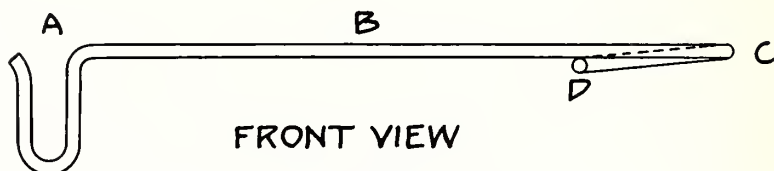
There are several devices on the market by means of which the photographer can include himself in a group. Some of these are mechanical, some are electrical, all of them cost more than a few cents, and few could be made by the ordinary amateur for his own use. There is also the

old method that kind friends still suggest as a new idea — that of using a long tube and a big bulb. There are many drawbacks to this arrangement, the least of which is the cost of the bulb and the necessary length of tube. Photographs made in this way are disfigured by the line of the tube leading from the object to the very near foreground, and the photographer defeats his own ends by the agonized expression of his face as he attempts to compress a bulb the size of a small football. Some try to use a bicycle-pump instead of a bulb; but imagine a man working a bicycle-pump and trying to look unconcerned as he faced the camera.

To be successful, a device to make one's own picture must be invisible in the finished picture, simple and certain of manipulation, small and



TOP VIEW



FRONT VIEW

Fig. 1.

light so as not to increase the bulk of the outfit to be carried, and — for most amateurs — inexpensive. All of these requirements are met fully by a spool of black-flax thread. Tie the thread to the shutter-release, pass it under some smooth metal-part of the base of the camera — such as the shaft of the focusing-screw — to act as a pulley, so that a horizontal pull on the thread may be converted into a downward pull on the shutter-release, and the thing is done.

Although this is all that is needed with a shutter that requires resetting before each exposure, the widely used types of automatic shutters require too strong a pull for the thread to be used alone — the camera is bound to shake and the tripod is apt to upset. The only way out of this difficulty is to lengthen the lever-arm of the shutter-release so that a lighter pull working through a greater distance will spring the shutter. This may be done by means of the detachable wire shown in Fig. 1.

Drill a small hole in the shutter-release to receive the wire. Take a piece of small, stiff wire — such as a hairpin or a wire paper-clip — and bend it as shown in Fig. 1. The hook, A, is for the loop of the thread; then comes the straight part, B, about two inches long. A sharp bend at C bears under the arm of the shutter-release, giving rigid support; and the wire then comes back to D, where it makes a right-angled bend and continues for about one quarter of an inch. To attach the wire to the shutter-release, open out the bend at C enough to allow the short piece, D, to be inserted into the drilled hole from the back. Then close up C again so that the straight part, B, lies along the shutter release arm and passes above the part, D — see Fig. 2. The wire is then a rigid extension of the shutter-release arm, and

cannot shake loose nor drop off. Five minutes is ample time to make one of these attachments to suit any shutter. It is time well spent.

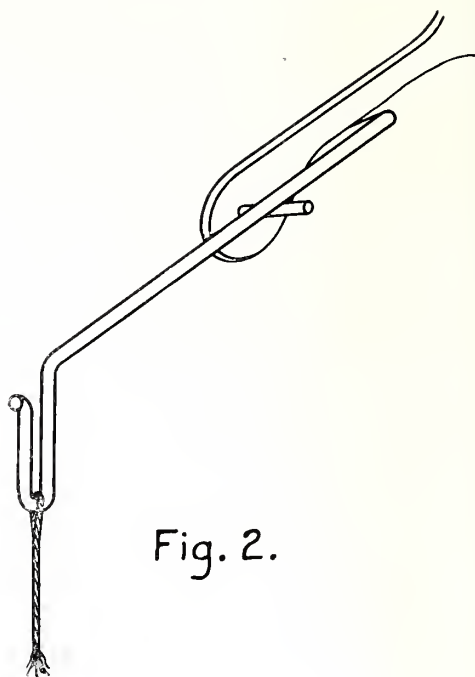


Fig. 2.

With the wire-arm bent and fitted, and with the camera empty, practise pulling the thread at different settings of the shutter until you get “the feel of it” and can tell just when the shutter is about to spring. Use a steady pull — do not jerk. Then practise looking unconcerned at the

moment of pull, so that you will be able to form a natural part of any group of which you may be a member. The writer has made a photograph of himself — such is the conceit of mankind — in a light that necessitated an exposure of twelve seconds. The shutter was set at “bulb,” and the thread was attached to his foot under the table so that both hands could be shown in a working position upon the drafting-board at which he sat. The resulting negative showed no blurring from the shaking of either camera or subject. However, it is not necessary to attain this degree of proficiency before you can give yourself and your friends much pleasure by including yourself in a group that would be incomplete without you.

[The foregoing experience recalls to the Editor the early days of amateur-photography when, in the eighties, he improvised a device to include himself in a group or to make his own portrait. He made, what afterwards was known

as a “drop-shutter” à la guillotine. It consisted of a square piece of board, fitted over the lens and grooved to receive a long, thin piece of board working vertically. The latter, with a square or circular hole in the center, was raised, covering the lens, and held in place by an ordinary pin. A long black thread, operated by the foot of the sitter (myself) pulled out the first pin and allowed the slide of the shutter-drop, thus making an instantaneous exposure. For a prolonged exposure, the same manipulation caused the slide to drop and to stop, with its opening, uncovering the lens; a second gentle pull of the black thread pulled out another pin, thus letting the slide complete its descent and cover the lens. Several hundred of those “drop-shutters,” costing but a trifle — in these days of low prices — were given away shortly afterwards to amateur-customers by the enterprising proprietor of a Boston photo-supply house.]

Burson Seeks Publicity

MICHAEL GROSS

THE invitation to the neighborhood lawn-party had been addressed to the firm, but Art, who was busy turning out an order, persuaded Burson to go alone. The affair proved to be one of the regular, hackneyed “pahhties,” and Burson wandered around like a lost soul, wondering what he could find to talk about, and to whom he could say it when found.

Suddenly one of the guests, a young fellow who was evidently “the life of the party” — Burson had noticed that every gathering invariably included one of these pests — produced a box-camera, and, showing it around, yelled: “Say, girls, if you’ll all form in a group, I’ll snap a dandy picture.” At this, six or seven young ladies, of the type who are glad when someone else suggests an idea, because it saves them the trouble of thinking, immediately ranged themselves alongside the hedge. The camerist took up a position about twenty-five feet in front of them and prepared to make the photograph. Burson, who was watching him, had to smile at the fellow’s colossal ignorance of things photographic. At the distance the picture was being taken, the girls would appear like mere specks on the film. He controlled himself as long as he could, then finally blurted out: “You’ll have to get nearer than that, or those young ladies will look like a series of exclamation points in the picture.”

The photographer, seeing that someone else was about to steal his thunder, naturally resented the intrusion. “What do you know about it?” he asked sarcastically.

“Just a little,” Burson said calmly, but with a touch of hardness in his voice. “I make my living by photography. Won’t you believe me when I tell you that you are too far away from that group to make a successful picture?”

The rest of the party, attracted by the discussion, were now gathered about the two, and the camerist, seeing that Burson had scored a point with the crowd, looked up at him meekly, as though in mute apology for his rudeness. Burson, interpreting the glance, said, more kindly: “I’ll tell you what we will do. I could take your camera, and no doubt make a good job out of photographing this group, but that would n’t help you any. Now, you just try to get my picture right where I am standing and I’ll tell you, as you go along, how to work your machine.”

The young man nodded his acquiescence and immediately stepping back about ten feet from where Burson stood, leveled his camera at him, the crowd watching interestedly.

“You’re too far back,” Burson criticized.

“I suppose you know merely by looking, but how can I tell?” the camerist inquired innocently.

“Locate me in the little piece of ground-glass that is set into the top of the camera,” Burson

said, "and see how much of that space I occupy."

The camerist did as directed. "Oh, yes; I see you," he said, after a moment's squinting, "but you're very small."

"Any better now?" Burson asked, walking in a few feet.

"It surely is," came the answer, "but you're still a little dwarfish."

"Look again!" Burson commanded, coming in a few more steps.

"Another little bit would just about make it, I think," the camerist said, and Burson again stepped forward. He was now only a few feet from the camera, but thinking that the fellow was attempting a bust-picture, he said nothing. The photographer finally expressed himself as being satisfied with the size of the image on the ground-glass.

"All right," Burson said, "when I move my foot, push in the little button that appears on the side of your camera. Please notice how my eyes are fixed directly into the lens. See to it that every person you photograph does the same thing and you'll be sure of a good likeness, every time. Now, then, push the button!"

Burson moved his foot and saw the fellow press a little lever at one side of the box. The next thing he knew, something that looked and felt like a giant snake had hit him squarely in the face, and then he heard a gale of laughter sweep through the crowd. For a moment, he was too dazed to realize what had occurred; but as his wits cleared he saw that he had been made the victim of a practical joke—and the laughing-stock of the party. The camera was no camera, at all. It was merely a box, fitted up to resemble a Kodak, and containing a long, stuffed paper snake, fastened to a wire spiral, which, when the lever was pressed, shot forward through the lens-board. It suddenly dawned on Burson that the reason the fellow had wanted to stand so far away from the group of girls was because he feared that the snake would hit them. And his second thought was he had been lured to step up close to the camera so that, in his case, there would be no chance of the snake missing him.

To say that Burson was embarrassed and humiliated would be putting it mildly indeed. For a moment, he wished that an earthquake would swallow him up, or that one of the trees would fall on him and drive him a thousand feet under the earth; but, finally recovering his composure, he said, in as calm a voice as he could muster: "Now that this gentleman has had an opportunity to perpetrate his cheap comedy, I will run over to my studio, which is only around the corner, get a genuine camera, and make a real picture of this party—one that will do justice

to all the fair beauties I see around me."

This pretty speech won for Burson so many exclamations of delight that, his former embarrassment forgotten, he started off to the studio for his apparatus. Art, who was in the dark-room when Burson entered, came out in time to see his partner packing up his studio-camera. "Going out for business on Sunday?" he asked in surprise. "I suppose it will take an earthquake to stop you from making money."

Burson smiled. "This is n't business, Art, nor will we make anything by it. In fact, it's going to cost us money, but the publicity that will result ought to be worth many times the amount we spend. I'm going to make a picture of the crowd at the lawn-party," Burson went on, in explanation, "and then give each girl a photograph absolutely free of charge, with the compliments of Burson & Condit. There won't be very much in our line that these girls will not send to us, after we prove our generosity in this way."

Art nodded his agreement to the scheme, and Burson, slinging the camera over his shoulder and taking up the tripod, hurried out. Once back to the scene of the party, Burson had little difficulty to get the crowd into a group and to make the picture. "I'm going to give each girl here a finished photograph free," Burson said as he repacked his outfit. "It will be a present from Burson & Condit, and we are doing it to give you an idea of the kind of work we turn out. The pictures will be ready to-morrow night," he added, "and I'll deliver them, personally." There was a chorus of delighted exclamations at this statement and, soon after, Burson left, excusing himself on the score of having to get the pictures out on time.

The partners spent all of the next afternoon making a print for each girl in the group, and that night, thinking that it was best that the neighborhood get to know them both, went out together to distribute the photographs. The first girl to whom they handed a picture looked at it long and earnestly. "It certainly is a fine photograph," she began, and Burson nudged Art to witness how smoothly his plan was working out. "That is," the girl continued, "it certainly is a fine photograph of every one else but me. I think you have made me look terrible. I appear to be about sixty years old. Why," she went on in righteous indignation, "I thought you knew more about photography, Mr. Burson, than to make the picture when you saw me with that idiotic grin on my face."

Burson was about to remark that, in photographing a large group, it was apt to be a little hard for the operator to take particular note of



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THE RESOLUTE ON THE WIND
F. A. WALTER

the expression on each individual's face, and that if the young lady in question knew she looked idiotic when she smiled, she should have kept serious; but, fearing to arouse further antagonism, he wisely refrained. The girl was about to hand the photograph back, but Burson stopped her. "No, keep it," he said, "it won't cost you anything."

"Very well," the girl said unenthusiastically, "but the likeness of me is not nearly so good as the one Stankins made a few weeks ago."

As Stankins was their closest competitor, Burson quickly changed the subject, and a little later the boys bowed themselves out. "That's what you call 'boomerang advertising,'" Art said as they walked from the house. "You hand out a dollar-photograph free. Immediately it comes back and hits you where you least expected to get it — in the neck, to be exact."

"Oh, that girl is an old grouch," Burson said. "If someone gave her a bowl of gold-fish for a present, she would n't say 'thank you' until she had tested each fish with acid to see if it was real gold or only plated."

But the town seemed to be filled with "old grouches" that night. The next girl they called on also thought that everyone in the picture had been taken successfully but herself, and accepted the gift of a free print as though under duress.

"I've never in all my life had such a hard time giving stuff away free," Burson remarked, after the third picture had been accepted grudgingly. "I wonder what these girls would do if we had decided to charge a dollar a photograph?"

"In that case," Art assured him, "the pictures would have been appreciated. It is only because we are giving them away free that there is so much complaining. Did you ever hear applause from a fellow that had been admitted to a

theater free of charge? Of course, you have n't. And the same thing applies to our 'free list.'"

By eleven-thirty all the pictures had been distributed. What struck the boys as strange was that, though each person in the group appeared certain that everyone else had photographed well, the partners could not find one girl who would admit that the picture did her justice. "I think it's a beautiful photograph of Ruth, even though it does flatter her considerably," would come the answer, when Burson mentioned that Miss Ruth, although not liking her own picture, thought the person he was talking to had been taken rather well. "I'm surprised to hear you say that she did n't like it. Does she want the photograph to make her look like Lillian Russell? The camera can take only what is in front of it, and cannot be expected to perform miracles. But anyone with half an eye can see that this is a terrible picture of me. You can tell Miss Ruth that I think it very impertinent of her to assume that I look anything like your photograph of me."

"Oh! Woman! Woman! Thy name is surely not consistency," Burson groaned, as the same burden of song, with only a few minor variations, greeted them in every house they visited.

At midnight the partners were back in the studio — tired, dusty, hungry, heart-sore and feeling as though they did n't have a friend in the town. "We surely did get some fine publicity out of those pictures," Art observed wearily. "If we had put a full-page advertisement in *The Clarion*, calling attention to the fact that we were the worst photographers in town, we could not get more people to believe it than we have done by giving away free only fifteen dollars' worth of pictures."

And Burson, realizing the truth of the statement, said never a word.



PIKE'S PEAK, COLORADO

KENNETH R. HARTLEY



WHITE ASTERS

ALICE E. SOUTHER

Efficient Spotting

AUGUST KRUG

HOW many photographers — amateur or professional — are there who habitually produce faultless negatives and prints in which no pinholes or marks of the enemy, dust, are apparent? Not many. And all others are interested in the cure of these evils — spotting. The purpose of this paper is to bring forth a new method to dispense with these misplaced, undesirable highlights and shadows. Amateurs, as a rule, are none too skilful in the use of camel-hair brush and opaque, the usual tools employed.

The brush must not be too wet, otherwise it will cause the pigment to spread beyond the confines of the spot. It must not be too dry, else no color will be deposited. At the best, but five or six spots can be made at one filling. And then the uncertainty of the operation!

The writer has been particularly unfortunate, it would appear, in the matter of dust-specks on negatives, and these always occur on the lightest portions of the print, where they show up most readily. Bungling work in removing them is apparent at once, and it was felt that the brush- and

opaque-method was inadequate. In casting about for a more efficient method, he hit upon the following, and vouches for its superiority in every respect. Ordinary printer's ink is the medium used. This can be obtained very cheaply and in colors to match all prints, as well as a good opaque black for negative-work. "Sullmanco" inks have proven well fitted to the task. For the application, construct a few tools as follows: From an ordinary pencil, remove the rubber-tip. With a pair of pliers, thrust a sewing-needle lengthwise through the rubber so that the point projects about a half inch. Break off the eye-end of the needle where it enters the rubber, and replace this latter in its original position at the pencil-end. This will provide you with a needle-point held rigidly, yet with a certain amount of flexibility, which is useful. Other methods to accomplish the same result will no doubt suggest themselves, but the one described will probably be found to be the simplest. Now grind off the point slightly and the instrument is complete. Prepare several of these, using needles of different sizes and grinding them off to different degrees. Use a mild stone to do the grinding, and hold the needle at right angles to the stone. Also allow the sharp point to remain on one or two needles, for fine work.

When ready, spread out just a little of the ink on an old negative, working it with the blade of a knife. Then, holding the needle vertically above, dab at the glass. This will remove a little spot of ink on the end of the needle, and this is now transferred to the negative or print in the same way. The operation is repeated as often as may be necessary to remove the blemish. Do not use too much ink. The size of the spot produced is always the same, regardless of the pressure employed. This is of great value, as the work can be speeded up to an extent unknown when a brush is used. The sizes of dots can be varied to suit the delicacy of the work. The ink may be kept almost indefinitely by imprisoning it between two cover-glasses or old negatives, and is always ready for use without preliminary mixing.

Not the least of the system's advantages lies in the fact that prints spotted in this way may be

washed in water to get rid of surface-dirt without affecting the spotting. The tendency of rough-surfaced papers, especially, to accumulate dirt is well known and, ordinarily, would necessitate tedious rubbing with art-gum to remove it. If necessary, the work may be removed by rubbing with a rag or tuft of cotton moistened with benzine or turpentine.

As a rule, in negative-work, the aim is to get the transparent spots filled with pigment. Use large needles for this. For prints, observe the following rules: Keep away from the edge of the spot. Don't try to fill in the spot completely, but make a series of small dots which shall approximate the surrounding parts in tone. Under-spot rather than over-spot. For small white spots on prints, a black dot in the center is usually sufficient. Let the photographer—even the beginner—heed the instructions given herein, and he will be able to say, with Lady Macbeth, "Out, damned spot!" and stay out.

Technical Perfection and Art

THE technically perfect representation of a subject, whether a Dutch painting or a photograph of a scene in nature, is not art. It may invite the admiration of the observer—a brief sensation and all is over. A picture of that kind mirrors the character of its author—a man of no soul, no emotion. On the other hand, a picture—produced by the camera—one that tells a story, something that establishes an intimacy between the artist and the beholder, the meaning of which comes by degrees and causes a pleasant sensation in the mind, such a picture is worth while. It compensates the author for his effort and pains and is a tribute to his artistic skill. He is made to feel that he has contributed a considerable share to the world's happiness, just as much as the vocal or the instrumental artist by a grand performance. The latter has departed or, at least, is not available, and his performance lives only in the memory; but the work of the successful pictorialist speaks to us visually and constantly, as it graces the wall of our home.

WILFRED A. FRENCH.





A MISTY AUTUMN-MORNING
GEORGE KRAUSE

Photographing [by Moonlight

WILLIAM S. DAVIS

THE making of *real* moonlight-photographs affords a delightful opportunity to obtain results both beautiful and out of the commonplace, since the field has been scarcely touched with the serious intention to present the material in a pictorial manner. Furthermore, although the earlier experimenters chose snow-scenes for their trials — on account of the extra amount of reflected light present—it will be found that attractive subjects are available at all seasons of the year and under varied atmospheric conditions. Naturally, certain limitations are en-

phernalia must be required to make pictures by the light of the moon. As a matter of fact, such is by no means the case, for it is possible to do very creditable work with a simple box-camera loaded with any good brand of fast plates or films. However, to obtain the greatest control of the fine points of photographic technique, it is better to use a focusing-type of camera, fitted with a ground-glass screen, small finders being especially unsatisfactory to locate the image and to study the composition of a night-scene of any kind. Large field-cameras are not desirable, as the longer focus lenses needed with them do



ON A WINTER'S NIGHT

WILLIAM S. DAVIS

countered, owing to the working conditions being different from those existing during daylight-hours; but this adds only zest to one's efforts, and when results prove successful the feeling of satisfaction in a deed well done is compensation for the additional care involved.

As the first questions usually asked by the average amateur when a new line of work is attempted are those connected with apparatus and other technical details of manipulation, such natural curiosity may as well be gratified at once — especially as not a few seem to be under the impression that some sort of wonderful para-

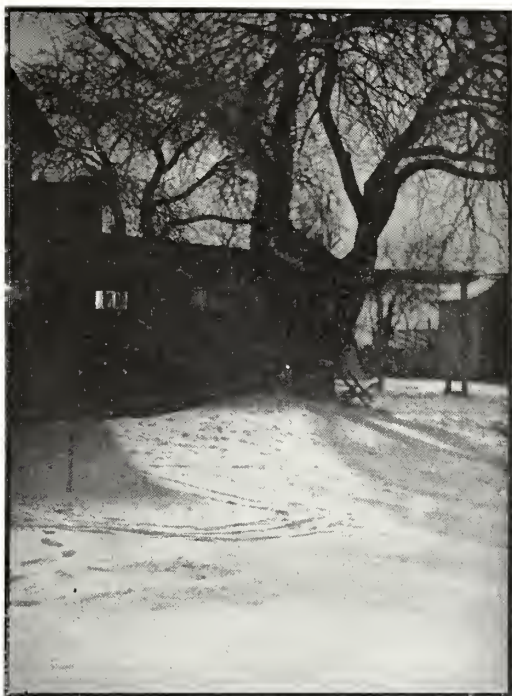
not possess much depth of focus at large apertures, so all things considered a long-focus plate-camera of about 4 x 5 is best suited to this work. This should be fitted with a lens of from eight to ten-inch focus; a rapid-rectilinear working at a speed of F/8 will answer the purpose very well. Of course lenses of greater aperture are more convenient, because they allow one to cut down the length of exposure, which at best is measured by minutes rather than fractions of a second.

It is advisable to use a good firm tripod, to guard against possible vibration during exposure. Few accessories are needed. A simple

"view-meter," which may be made of cardboard, along the lines of a direct-vision finder, only larger, is very convenient to study the subject-matter before setting up the outfit; also some pieces of gummed-paper should be taken along, the use of which will be mentioned later. Fast grades of plates will be selected naturally—the faster the better so long as quality of gradation has not been sacrificed by the makers to speed alone. I am in the habit of using a well-known brand of rapid Iso. plates, although I am not sure for this kind of work that they are superior to plain emulsions, never having made comparative tests. The necessity of employing a "non-halation" variety is less imperative than when artificial lighting-effect is the motive; but under some conditions it might be safer to use them to prevent spreading of brilliant highlights. When it comes to the exposure, considerable latitude is allowable, at least upon the full side, for there is always an opportunity to control the amount of detail shown in the finished picture by simple alterations during development of the negative and in the printing. The main thing is to make sure to get at least the minimum amount of detail or gradation which a given subject demands for adequate rendition.

Using plates or films possessing a speed of Wynne 120, Watkins 200, or Class $\frac{3}{4}$ of the PHOTO-ERA Exposure-Guide, and an F/8 lens-stop, from ten to forty minutes are required, according to the character of the subject, when night has fully set in. Sometimes the exposure may be shortened without losing the effect sought by taking advantage of the diffused illumination existing in the late twilight, which softens the shadows without conflicting with the direct lighting from the moon. Under these conditions I have sometimes found a very few minutes sufficient, especially with snow or water in the immediate foreground. However, personal experience will prove the best guide in this class of work, though reference to the data given elsewhere concerning the illustrations accompanying these remarks will help as a starting-point for the various types of subjects shown.

There is no trickery or secret of any value connected with the development of night-scenes, for no developer can bring out in the negative what has not been impressed upon the emulsion by the exposure, and with anything like adequate timing the image will come up without forcing, the same as with any other class of subjects. The only advice worth while is to use a fairly dilute solution of a normally soft-working developer—say about one-half the strength of the formulæ usually given for tray development—so that sufficient time may be allowed for all



NIGHT-SHADOWS

WILLIAM S. DAVIS

possible detail to appear before the highlights block-up. Especial care should be taken to expose the plates as little as possible during development to the darkroom-light, since the slightest trace of fog would be very noticeable. Owing to the prevalence of deep shadows, a normally exposed and developed negative will naturally be thin and soft, with the exception of the small space taken up by the strongest lights, and this is liable to deceive inexperienced workers into thinking that the result is defective in some way.

Perhaps the most surprising "stunt" to the uninitiated is the inclusion of the moon without showing any blur from motion, for, as every one knows, if the moon is allowed within the field of view during the long exposure needed for the landscape it would appear in the picture as a trail of light. As a matter of fact, the dodge I have used successfully for a number of years is very simple—being nothing more than making two exposures—one upon the foreground, and the other for the moon alone. When making the main exposure the moon is excluded from the field, after which the dark-slide is replaced, holder withdrawn, and the image examined to ascertain the best place for the moon to appear in the composition. A small piece of gummed-paper with a hole in the center is then stuck to the focusing-screen in the spot selected, and the camera tilted

until the moon is seen in the correct position. A second exposure is given of from ten to twenty *seconds*, either upon the same plate or a separate one, according to circumstances. If the picture is made after night has fully set in one is entirely safe in making both exposures upon the same plate, as no suggestion of a double image will appear because of the great difference in the length of the two exposures; but in the case of early moonrise-effects, or when one is not quite sure of the best spot for the moon to be placed, it is better to use another plate — this is placed back of the landscape-negative while printing. In this connection it may be noted that lenses of relatively short focus, such as the six-inch commonly fitted to a 4 x 5 camera, do not produce an image of the moon that is large enough to *appear* natural in relation to the rest of the view, and when sharply focused the effect is also hard and un-atmospheric. Owing to its brightness the moon looks larger to the eyes, and consequently fills a greater space in our mental impression of a scene than is actually true optically; but as the character of the picture is so largely determined by the degree with which *impressions* are rendered, one is justified in showing the moon upon a larger scale. This is one reason why I suggested the use of a longer focus lens for this work — eight to ten-inch on a 4 x 5 camera. Although the



THE SILVER-GLEAM

WILLIAM S. DAVIS



EDGE OF THE WOODS

WILLIAM S. DAVIS

size of near objects can be altered in the picture by moving nearer or further away, the image of the moon can be altered in size only by changing the focus of the lens. Should a long-focus lens not be available, the image produced by the regular lens may be made considerably larger by racking out the lens-front an inch or so beyond the normal. Curious as it may seem, this does not destroy the image of the moon, but simply gives it a pleasing softness, which can be regulated, if desired, by using a size or two smaller stop in the lens, according to the effect desired.

If one first notes the direction in which the moon rises — which varies with the time of year — many desirable subjects can be located by daylight with the help of a pocket-compass to give the bearings, and should the sun be in approximately the position that the moon will appear later a quite fair idea of the latent possibilities may be had by looking at the scene with half-closed eyes, though the characteristic moonlight-atmosphere will naturally have to be supplied by the imagination. This mode of hunting subjects saves considerable time at night, for with the standpoint selected beforehand several exposures can be made in one evening. It is possible to pursue the work for a number of nights each month — weather permitting — if one commences two or three nights before the moon fulls. The flattening of the moon's disk is so slight at

such times as to be unnoticeable in a picture. In making marines showing a flat beach with water in the foreground it is best to expose, if possible, at "slack water," thus avoiding the blurr caused by a changing tide-line. The same advice also applies when shipping is included, as the rise or fall of the tide might be sufficient to affect the definition of vessels moored at a wharf. In any case, shipping should be taken only in quiet weather, when the water is smooth and clear.

plicable. The pattern created by the forms, or edges, of objects against the sky constitutes the most important single element of a night-composition, for observation shows that a pronounced characteristic of moonlight is to divide a scene into a few flat masses of dark tone, accented by concentrated highlights formed by the moon and its reflected light upon water, or bright objects. For example, in landscape with clumps of trees, parts which by daylight would exhibit



MAY-EVENING

WILLIAM S. DAVIS

Having described the technical side I cannot drop the subject without calling attention to the need of personally studying the peculiar quality of night-effects before one can expect to produce satisfactory pictorial interpretations. By no means the least important point to consider is the selection of suitable compositions, since many attractive daylight-subjects lose their quality entirely at night, and some simple bits which might ordinarily be overlooked acquire a wholly unexpected charm in the moonlight. As most of these views are made with the source of light in front, some of my suggestions upon composition in the article "Against-the-Light Effects," in the June, 1917, issue of this magazine, are ap-

numberless half-tones are merged into broad shadows, in which detail is quite indefinite and wholly subordinate to the whole. Although the shadows in moonlight possess a vague, mysterious quality, which it is essential to preserve in the picture, they are not devoid of atmosphere in any fairly open scene — consequently, they cannot be truthfully represented by absolute black, a fact to be kept in mind when making a print.

From the foregoing the reader will be correct in believing that simple forms silhouetted against sky or water furnish attractive material when the moon, or its reflected light upon water, is used for accent; but another interesting phase is to photograph a scene illuminated by moonlight

falling upon it from one side. Many open landscapes with massed foliage in the middle-distance, also certain winter-scenes, are adapted to such treatment. The illustration "On a Winter's Night" is an example, and though it will be seen that the relative proportion of deep shadows is naturally different under a side-lighting there is a quality about the finished picture which differentiates it from anything which might be made of the same subject by daylight, perhaps the most characteristic feature being the tone-value of the

sky in relation to all the other parts. Some diffusion of the image usually aids the impression in moonlight-pictures, and this may be imparted at the time the exposure is made, or by various means when printing. Rough papers generally help to give "quality" to the deep, flat shadows, fine results being possible by proper manipulation of bromide-papers. The various pigment processes, gum-bichromate, carbon, etc., are especially well adapted to the purpose when worked with skill.

Covering-Power and Definition

FOR some reason or other most photographers have an idea that it is quite in excess of their power to learn anything about lenses beyond the fact that they are essential adjuncts to the camera, that they cost a lot of money and that they do not always yield good pictures. Perhaps one reason for this is that to have a deep knowledge of the design, properties and construction of lenses a man must be a fairly competent mathematician, and mathematicians can only express themselves by using mathematical symbols and terms of which the ordinary man knows naught, so that at the outset he is virtually shut out from all lens-lore except the few pages usually devoted to the subject in general text-books on photography. We, therefore, feel that no apology is needed for again repeating some elementary information of a practical nature on a few selected points.

A point on which much misconception exists is "covering-power." Very often a lens which would answer capitally for wide-angle work is overlooked in that connection because it has been purchased for another purpose, and the owner has no idea that its powers go beyond what it was supposed to do. As an example, there is a very cheap anastigmat often fitted to quarter-plate hand-cameras which, upon testing, was found to illuminate a circle of over ten-inches diameter, and therefore capable of being used as a wide-angle lens on a whole plate, its performance at a given aperture being better than a professedly wide-angle lens of similar focal length. It is believed by many that the covering-power of a lens is increased by stopping down. This is true only in the sense that the area sharply defined is increased, but the size of the circle illuminated, and consequently that of the largest plate which can be covered, remains the same. In fact, with one well-known make the size of the circle of illumination is appreciably reduced at the

smaller apertures of the diaphragm. Covering-power is not in any way dependent upon the focal length of the lens, but upon its construction. Of course, with lenses of any one class, such as rapid rectilinears, the covering-power increases in proportion to the focal length; but when different classes are compared the difference is very marked, a short-focus anastigmat usually covering a much larger field, whether expressed in terms of illumination or of definition, than a rapid rectilinear of much greater focal length. The circle of illumination of lenses of the rectilinear type can usually be increased by decreasing the separation between the combinations, but the focal length is very slightly affected by this operation, so that if the intention is to convert a rapid rectilinear into a wide-angle lens it is necessary that a larger plate be used.

Sharpness of definition is a rather uncertain term when applied to the performance of a lens. Very few photographic lenses come up to an astronomer's standard, and it is not necessary that they should do so, but even photographic lenses vary to an enormous extent. It is not desirable here to go into the causes of such variations, but rather to show their effect upon the quality of the negative, and this is an important question when copying fine-line subjects or making negatives when subsequent enlargement is to be undertaken. Many expensive modern lenses, especially those of the larger sizes, leave much to be desired in this respect, and it would surprise many of their owners if plates were exposed upon a page of clear print, upon smooth paper, such as we find in the better-class magazines, using apertures of $F/5.6$ and $F/22$ respectively. In most cases small type, such as that used in our small advertisements, if reduced to one-fourth scale, will be hardly legible at full aperture, while it will be quite sharp with the smaller opening. A slow plate should be used for this trial, as the coarse grain of some of the extra-rapid emulsions would



CTTER CREEK VALLEY

L. F. BREHMER

interfere with the results. For portraiture and certain classes of landscape and architectural work such critical sharpness is not necessary nor desirable, so that various devices have been employed to soften the definition at will, or special lenses have been constructed which are incapable of giving a sharp image.

It is not possible to define sharpness with any exactitude, so that it has been found necessary to take as a working standard a "circle of confusion" $\frac{1}{100}$ of an inch in diameter as a practical working standard. As is well-known, every point of light in the original subject is represented by a tiny disc upon the photographic plate, and when these discs do not exceed $\frac{1}{100}$ of an inch in diameter we call the image sharp. On the continent the standard is $\frac{1}{200}$ of an inch. Photographic definition differs from that produced by the draughtsman or painter, inasmuch as the photographer has no local control over the edges of his areas of light and shadow. A picture may be painted in the broadest possible way with large dabs of color, but the edges of these dabs are more or less sharp, and serve to define such details as it may be desired to emphasize. In the same way the roughest sketch in pencil or chalk owes much of its sharpness to the edges of the strokes.

A photograph is, on the other hand, more like a pure mezzotint in its character, but without the mezzotint grain, so that it is difficult not to degenerate from softness into smudginess. For this reason many photographers wisely adopt a rough-surfaced paper for their soft pictures, or use one with a canvas-grain. In either case the smooth texture is broken up, and something of the mezzotint quality is obtained. About ten years ago Mr. Howard Farmer suggested the use of a reversed copy of a cross-line screen, which he placed in contact with the sensitive surface when enlarging. This broke up the shadows, and in a less degree the half-tones, into a grain which, although imperceptible to the eye, relieved the hardness of the image.—*British Journal of Photography*.



Books are the records of man's accomplishments. They are the means by which each generation acquires the experiences and inspirations of the generations that have passed and lifts itself to a higher level. An appetite for good books is as necessary to the growth of mentality as is an appetite for good food to the growth of the body.—*Glen Buck*.



A DREAM OF SILENCE AND OF PEACE

H. C. MANN



EDITORIAL



Radiography and Photography

WHAT'S this! Thorne Baker appearing before the Roentgen Society and talking about X-ray photography? Mr. Baker is not the only writer to fall into this somewhat popular error. There is a certain worthy gentleman — a great admirer of the art of photography — who writes an article on the history of the art-science for a prominent American art-journal. It is really entertaining to note the breezy manner with which he treats a subject of which he has no practical knowledge whatever. He, too, refers to radiography as photography and to radiographs as photographs. Although almost any good dryplate will yield a radiograph, there are regular X-ray plates — specially prepared for the purpose; but he who exposes them, in the usual way, is not necessarily a photographer, no more than he who makes a blue-print. Many good people imagine that because a hospital-physician exposes an X-ray plate on a patient, or an expert radiographer makes a film-record of a defective tooth, each must be a photographer. Far from it! Photography — as our readers know, of course — is a process divided into several different stages, the first of which is the application of lens-optics — producing images of visible objects. Naturally, the process of photography would be a failure were it not for the successful fixation of the positive image, whether on glass, metal or paper. This probably accounts for the inadequate dictionary-definition of photography, viz., "The science which relates to the action of light on the sensitive bodies in the production of pictures, the fixation of images and the like."

Radiography reveals the precise location of foreign objects or substances in the human body, as well as the structural and physical condition — not the external appearance — of organs, bones and tissues by means of shadographs, the first direct result being the negative and, a direct copy thereof, the positive. But because the production of these shadographs or radiographs resembles a certain step in the practice of photography, the term "X-ray photography" found its origin. Therefore, any reproductive process in which the image is formed otherwise than by a lens or a pinhole is not photography. Happily, X-ray work — as a special process — has been designated as radiography, and as this is a cor-

rect, expressive and differentiating term — or, at least, until replaced by a better one — it should be used exclusively, thus avoiding confusion and ambiguity.

Honoring Lumière

ELSEWHERE in this issue reference is made to the tenth anniversary of the introduction into this country of Lumière Autochrome plates, and the hope is expressed that camera-clubs celebrate this event in some fitting manner. One way might be to arrange a display of Autochrome transparencies by masters of the process, and to read papers setting forth the present-day method of manipulation, which is simple, quick and certain. In honoring Lumière, we also honor France.

Learning From Each Other

IT is well-known that the late John J. Enneking profited by examining the work of photopictorialists. He admired their originality in conceiving and treating a theme, as well as the taste and sentiment they imparted to it. He was quick to perceive the free and simple beauty of certain landscapes by Macnaghtan, Anderson, Davis, and genres by White. He was ever the student, and observed the efforts of others with a view to excel his own glorious performances. Other painters are gleaming ideas from the work of artist-photographers, but refrain from acknowledging the debt thus incurred; whereas many ignore photo-pictorialism altogether. On the other hand, pictorial photographers, professionals as well as amateurs, may learn much from the artists of the brush, but should do so with discrimination and reservation.

Similarly, the amateur camerist may study profitably the work of the master-photographer, and to this end should visit the exhibitions of the various state-associations. Here the real artistic impulse of the professional finds an outlet, often more freely than in his own studio, where he is more or less restricted by daily routine. Of course, the usual work of the masters of the craft is in itself worthy the attention of the student-amateur; but their contributions to the National or State photographic salons represent the spontaneous expression of their artistic temperaments as well as their executive ability.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

Rules

1. This competition is free and open to any amateur desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of ***stiff corrugated board, not the flexible kind, or with thin wood-veneer.*** Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

Quarterly Miscellaneous Competitions

THESE will continue to be featured in PHOTO-ERA competitions during 1917 and 1918, so as to afford more opportunities to our readers to win official recognition.

Awards — Miscellaneous Competition

Closed August 31, 1917

First Prize: T. W. Kilmer.

Second Prize: Leander Miller.

Third Prize: Paul Wierum.

Honorable Mention: James C. Baker, David Beehler, Chas. J. Bernauer, Arnold O. Brigden, Alvah G. Clark, H. C. Cowles, John G. Dickson, B. F. Gray, Bertran F. Hawley, Carl Hermes, Franklin I. Jordan, Max Keroff, Warren R. Laity, C. M. Mansfield, R. J. Morrow, J. W. Newton, J. Herbert Saunders, Kenneth D. Smith, W. Stelcik, R. B. M. Taylor, George Veldman, Elliott Hughes Wendell.

Subjects for Competition — 1917

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Domestic Pets." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Still-Life." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Shore-Scenes." Closes August 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

To Participants in Photo-Era Competitions

PICTORIAL contributors or participants in PHOTO-ERA Competitions should remember that a print receiving a prize or Honorable Mention in either of these classes becomes the permanent property of PHOTO-ERA MAGAZINE, for reasons explained in the Rules.

Nevertheless, the author of the print is not prevented thereby from disposing of other prints from such negatives, after he shall have received official recognition. This matter is explained in the Rules, and, particularly, in editorials in the April and August issues. You are requested to read both.



A YOUNG BUCK INDIAN
DR. T. W. KILMER
FIRST PRIZE — MISCELLANEOUS

Flashlights — Advanced Competition

[Ending December 31, 1917]

THE approach of long winter-evenings and dull days arouses new interest in flashlight-photography. The remarkable advance in the manufacture of flash-powder and flashlight-apparatus has simplified greatly this attractive form of photography, with the result that camerists may now utilize their winter-evenings to good advantage. For some reason, many workers fail to appreciate the possibilities that lie in a safe and efficient flashlight-equipment. Without due investigation they are sometimes inclined to belittle the value of the flashlight as an efficient artificial illuminant. Also, many camerists are frankly afraid to handle flash-powder in their own homes or the homes of others. Although it is true that the utmost care must be exercised at all times, this should not be interpreted as meaning that flashlight-photography is a dangerous pastime. In short, as in many other forms of activity, ordinary precaution and common sense will suffice to assure the safety of all concerned. Flashlight-photography owes its present popularity to the fact that it provides a method by which results are obtained that could be had in no other way. It provides a new field of endeavor for the camerist at a time of year when light-conditions are least favorable to photography.

The so-called portable skylight used on a tripod-standard and supporting a smoke-bag has been improved wonderfully, until its use is within reach of the novice. The flash-powder is fired electrically, the smoke does not escape into the room and a soft well-diffused actinic light is produced that yields excellent negatives. Those who make only occasional flashlight-photographs find the flash-sheets eminently suited to their requirements, though the smoke-nuisance is not avoided entirely. However, when only one or two pictures are to be made, the smoke may soon be driven out of a well-ventilated room. Pure magnesium is, perhaps, the safest and least objectionable light. This may be used as a powder, to be blown through the flame of an alcohol-lamp, or as a "ribbon," in which form it is exceedingly compact and convenient. The objection to the use of magnesium is that it is slower and is likely to show movement when photographing restless children or lively pets.

Whatever the medium used, great care should be taken to keep well clear of loose draperies, walls and ceilings. Also, look well to your fingers and thumb, lest the flash reach them and cause a serious burn. A dust-pan makes an excellent article on which to place a flash-cartridge to be ignited by a fuse. Usually, where the handle is attached to the under-side of the dust-pan, there is sufficient grip so that the hand may be well under the pan, and thus be protected at the moment of discharge. I have used this method many times when another and better flashlight-equipment was not to be had.

A dull winter-day and careful use of the flashlight is an excellent combination with which to photograph interiors. A weak flash — to avoid producing harsh highlights — may be used to illuminate the dark portions of the subject not reached by daylight. Sometimes, with the aid of a friend, two or more flashes may be made simultaneously. This is particularly well suited to pictures about the house in the evening. A distinct advantage possessed by the flashlight for interior photography is that at night there is little or no halation from windows to contend with. An electric pocket flash-lamp is of great service to help plan the composition of the picture on the ground-glass. Usually there is insufficient illumination to produce a well-de-

fined image on the ground-glass, and a friend walking about from one point to another with a bright electric flash-lamp will enable the camerist to determine the correct focus and the limits of the picture.

For some reason or other, many camerists seem to lose sight of the fact that composition is just as important in making flashlight-photographs as it is in pictorial- or studio-photography. There should be a center of interest, and simplicity should characterize the composition. In a home-interior it is probable that either a fireplace or a pleasant window will be the center of attraction. Whatever it may be, let it have the best illumination and be given that position in the picture-space which will give it most prominence. This done, so arrange the other furnishings of the room that they shall lead the eye to the main interest rather than detract from it. In planning the arrangement of an interior to be made by flashlight, it is well to place a lamp or other illuminant in the place where the flash is to be used, that the direction of the light may be allowed for in placing the objects. Be sure that no nearby chair or table is cut in half by the margin of the print. If there are any artificial lights in the room not included in the range of vision, they are better left burning, as they help to break up too strong shadows.

In making groups of people in the evening, it is very important that the room be light, as otherwise the pupils of the eyes are greatly dilated to adapt the vision to the darkness, and the result of the sudden blinding flash is a startled expression, even when there is in reality no feeling of nervousness felt by the subjects.

The cosy feeling of the fireside is greatly enhanced by representing the room as lighted by its glow. This is accomplished by using a flash in the fireplace. As halation would almost inevitably result from the unshielded flash, it is better to place a figure or piece of furniture between it and the lens. The magnesium-ribbon is a safe light to use in such work, and very convenient as well. A piece of ribbon the desired length can be arranged in the fireplace with a piece of string tied to one end as a slow fuse. The ribbon is also used easily in effects of candle-light or lamplight.

The flashlight-pictures entered in this competition should aim to keep away from hackneyed themes. Endeavor to approach the subject from an original and interesting point of view. If it is a group, try to arrange those composing it in a manner that avoids a "take-us-and-get-it-over" expression. If it is a domestic pet, try to make the result appear true to the life and natural. With regard to interiors, arrange the furniture, draperies, decorations and other things about the room so that the finished picture does not appear artificial and stilted. Be sure to see to it that all framed pictures with glass are so arranged that the flash will not cast a reflection across each picture, thus obliterating it entirely as part of the decorations of the room. In short, whatever form of flashlight-picture you attempt, make it natural, well-composed and of interest to all.

Much of the success of any flashlight-photograph depends on the careful selection of the proper printing-medium. Usually a soft-working paper is best. Prints may be toned a reddish color to carry out the idea of firelight. However, better no color at all than a crude attempt that destroys rather than helps an effect. In the present competition it would be better for contestants to confine themselves to the production of a pleasing black-and-white print devoid of any attempts to color it. Besides, prints in any color but black or delicate sepia do not reproduce well. Reference to the files of PHOTO-ERA will reveal many excellent examples of flashlight-photography. Readers should look these



THE CALL OF THE HOUR
LEANDER MILLER
SECOND PRIZE — MISCELLANEOUS



SUNSET-HAVEN

THIRD PRIZE — MISCELLANEOUS

PAUL WIERUM

up, as the published pictures will be of great help. The flashlight-competition of a year ago was exceptionally interesting and valuable to competitors and readers alike. It is hoped that this year greater efforts will be made to send flashlight-pictures of more originality, better composition and truer technical value.

A. H. B.

What the Public Wants

MUCH discussion has been waged as to whether the photographer should set his own standard or accept that of his customers, and it is interesting to note the epigrammatic remark of the late Sir Herbert Tree in his book "The English Stage": "Do not give the people what they want; give them what you want them to want, and in time they'll want it." If Sir Herbert acted on this principle—and he probably did to a very great extent—it was very successful in his hands. His Shakespearean revivals all came off with flying colors, and this was not because they were Shakespeare, but because, in addition to clever acting, they were so magnificently staged and presented. The theater-going public does not really like Shakespeare, and one might almost say the pill was gilded! The portraitist might take the hint, and improve the public taste in portraiture by doctoring it with gilded pills. The gilding required will vary according to circumstances, and may be on the photograph or on the way it is sold. We have known it to be the charm and attractiveness of the receptionist where there was an extensive clientele of young men. Or again it may be the embroidering of the pictures, the dainty elegance of the mounting and the framing. In a word, the buying of a photograph must be made an interesting and an attractive proposition; the staff must handle customers in the right way, the right way varying, of course, with the client; the premises must be kept bright, and whatever

is done in the way of educating the public taste must be built on a good foundation of already appreciated qualities, such as sound likeness, pleasing expression and judicious enhancement of good looks already present.—*British Journal of Photography*.

Figure-Composition in Landscape

PROSPECTIVE pictorialists desirous to improve their picture-making abilities with reference to a standard work on figure-composition are advised to consult the volume on this subject by Sadakichi Hartmann (Sidney Allen). This is a *de luxe* publication, 7½ x 10½ inches in size, beautifully printed on heavy coated paper, gold top and sides, and illustrated with over 150 halftones (from celebrated paintings and appropriate photographs by well-known pictorialists) and diagrams. This superb volume is from the pen of one of the foremost living art-critics, and is designed to guide amateur photographers to successful efforts in composition of landscapes with and without figures. The work was published, originally, at \$3.00, but PHOTO-ERA procured 150 volumes at a special price, and will sell them to its readers at \$1.50 a copy, sent by express, collect, or by parcel-post (consignee's risk), postage according to zone. Each copy, in a neat cardboard box, ready for shipment, weighs 33 ounces.

To Photo-Era Readers

THE Publisher earnestly requests the readers of PHOTO-ERA to give the preference of their patronage to goods and wants advertised in PHOTO-ERA; for no advertisement, whether large or small, is accepted unless it is trustworthy in every respect. This should be of vital importance to all buyers of photographic material, amateur and professional.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS
With Reviews of Foreign Magazines, Progress and Investigation
Edited by A. H. BEARDSLEY



Utilizing Old Autochrome Plates

DURING these uncertain times of transatlantic freight deliveries it often happens that a fresh supply of Lumière Autochrome plates does not arrive as promptly as desired, or that the stock at the photo-dealers' passes the expiration-date and consequently is apt to be discarded as useless. Fortunately for camerist and dealer alike, a formula has been found which produces excellent results with expired Autochrome plates. In fact, some plates were used and developed bearing expiration-dates as far back as 1913, and the results were very satisfactory. Incidentally, this formula has been found to be excellent for fresh Autochrome plates that are overexposed, even if they are developed in it not over fifteen seconds, as this formula does not cause any of the stains or cloudy effects which would come from an underdeveloped plate. Development should be carried on until the shadows of the plate have turned to quite a dark gray when looking down on the plate in the developer; the highlights will then have almost disappeared. This development may be fifteen to thirty seconds with an overexposed plate. The important point is to be sure to develop sufficiently, as the developer is not inclined to reduce the lighter colors such as the sky. The developer is given in the following formula:

Water	1,000 c.c.
Methynol (or metol)	5 grams
Hydroquinone	10 grams
Sodium Sulphite (dry)	60 grams
Sodium or Potassium Carbonate	45 grams
Potassium Bromide (10 per cent solution)	15 grams

The plates are to be developed in this until the image turns black, or until nearly all the grayish effect has disappeared when looking down on the plate in the developer. For a plate which has had a good, strong exposure, the development should take from one to two minutes. In view of the fact that this formula is the result of careful and thorough experiment, it is hoped that camerists will avail themselves of the increased opportunities which it offers to make the most of every out-dated Autochrome plate.

An Economy Note

At this time economy is a prime requisite everywhere, and for this reason the remarks of J. R. B. in *The Amateur Photographer* are especially timely. "It is useful to know that a half-plate will cut up into six small plates of 4.5 by 5 cm. ($1\frac{3}{4}$ by $2\frac{3}{4}$ inches) and this suggests a method to economize, as the relatively high price of V. P. plates is to cover extra cost of cutting, etc. To cut up a half-plate into six small plates, a rectangle the size of the small plate is marked out accurately on a piece of white paper as a guide, and the sides of the rectangle extended some distance in all directions. The plate is laid film downwards on this and moved into position, the cutting being done on the back of the plate with a diamond or wheel. The whole operation must be conducted in a very safe light, and with the minimum light that will enable the work to be done, the plate being protected from direct light. The operation must be performed deliberately and quickly, and the most expeditious method we have found to be to cut

latitudinal strips 4.5 cm. in diameter from the half-plate, cut these across and break the glass, but not the film, by bending inwards film to film, and immediately wrapping in light-proof paper. These plates are usually of thicker glass, but otherwise are identical with the small plates as purchased, and, provided care is taken in the cutting to protect the film from strong light, and to prevent abrasion of the film by small particles of glass, there is no reason why such home-cut plates should not be used regularly. Since a fairly large strip of plate is wasted in cutting a half-plate into six, a further economy might be to cut each half-plate into eight pieces, each about 4.1 by 6 cm. ($1\frac{5}{8}$ by $2\frac{3}{4}$), making the plates a little narrower than usual. Backed plates may be cut up in the same manner by first scraping off the backing with a pointed piece of wood along the lines to be cut, and one should note also that backed plates are less liable to be fogged than are unbacked plates, if the operation is conducted slowly, as the plate, being face downwards, is protected from light by the backing. It would be well, in adopting this economy, to begin with slower or non-ortho. plates until the requisite manual dexterity is obtained. With a little practice, however, we have cut up ultra-rapid and orthochromatic plates without the slightest sign of fog."

Testing a Lens

It is a difficult thing to form any true idea of the quality of a lens by trial in an ordinary camera. The differences between the best lenses are very slight, and may be easily hidden entirely by a slight inaccuracy in the camera itself, or in placing it. Of course, a rough and ready test upon a subject of any ordinary kind will show the difference between a good and a poor lens; but that is hardly what is here referred to.

One of the best methods to examine the quality of a lens is to focus with it a large flat object. A newspaper spread out upon the surface of a wall serves very well, as the various type, rules, etc., allow some form of comparative idea of definition to be obtained. It is absolutely essential to the success of this test, that the ground-glass on which the focusing is done shall be absolutely parallel to the plane of the test-subject, and the axis of the lens normal to both these.

As this is not easily obtained by any method of plumbing or measuring, the following method may be of interest. In the center of the subject and flat upon it is fastened a small mirror—a piece of glass silvered at the back in the ordinary way is all that is required. The camera being set up in front of the subject at the required distance, it must be so placed that when the image is focused a reflection of the lens of the camera is seen in the center of the image of the mirror. This shows that the axis of the lens is normal.

In order to make quite sure that the ground-glass and plate are parallel with the subject, all that then remains to be done is to see that the image at the four corners of the screen, or as near the four corners as sharpness can be got with full aperture, comes to a focus simultaneously. If it does not do so, the back of the camera must be swung until this result is obtained. Then, an intelligent decision is possible and one that will be of real practical photographic value.

A. HALSTEAD, in *Photography*.



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$5.00.

Second Prize: Value \$2.50.

Third Prize: Value \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

6. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.*

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

Awards — Beginners' Competition

Closed August 31, 1917

First Prize: T. D. Fields.

Second Prize: Lena M. Tewkesbury.

Third Prize: Arthur H. Farrow.

Honorable Mention: Martha Curry, W. T. Liao, J. Douglas Smith, Kenneth D. Smith, A. S. Upton.

Special commendation is due the following workers for meritorious prints: Fred Genscher, Irving S. Lovegrove, Geo. P. Russell.

Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

Strength of Light

IN determining exposure it should be remembered that it is the light which reaches the shadows which is the all-important factor, and that by the very nature of the case this must be reflected light. The most powerful reflectors which we have in nature are the clouds, and so it comes about that the shortest exposures can be made when there are plenty of white clouds about, and not, as is sometimes imagined, when the sky is an unbroken blue. It is for this reason that underexposures are very often obtained in countries where a blue sky is the rule by those who are not accustomed to such conditions. The light seems so strong that the paucity of reflected light is overlooked.—*Photography.*



YOSEMITE FALLS

T. D. FIELDS

Getting Down to Facts

THE time for photographic retrospection and introspection has arrived. By that I mean the time when all camerists who really care to grow in the art of photography should sit down with their summer's work before them and make a cold-blooded analysis of their pictures and of their own photographic efficiency. The long winter-evenings offer exceptional opportunities to inspect each photographic effort with the necessary leisure to reason clearly and constructively with a view to improvement. To condemn this or that picture for one reason or another does no good; but to take the same picture — unsatisfactory as it may be — and try to arrive at the reason of failure, and, having found the cause, to make a written note so that the error will not be repeated is, to say the least, ordinary common sense. How many camerists do this very thing that is of such practical value and requires so little effort?

Let us suppose that you have returned from the seashore and that it was your first season with a camera under the conditions of light and landscape prevailing along the coast. We will assume that you had fair success, but that here and there among your pictures are some that are virtually valueless because of errors in exposure, the use of lens-apertures, ray-filters and plates or film. Without a doubt, one or more of the poor pictures contained subjects that were the most important

to have clear and sharp and that were of the greatest value to you. In the circumstances, what are you going to do about it? Are you going to place the blame on the camera, lens or film, and assume an air of injured innocence, or are you going to get at the root of the trouble, even if you have to admit that *you* and no one or nothing else is to blame for the miserable pictures before you? If you decide to place the blame where it rightfully belongs, you are on the road to photographic success. Through your own efforts and the assistance of those who know, you should be able to return to the seashore the next season well prepared to meet any and every eventuality. Although the manufacturers of cameras and lenses are not infallible, it has been my experience that in most cases when things go wrong it is the man *behind* the camera that is likely to be the really disturbing factor, and not the manufacturer. Whether we admit it or not, it is human nature to hold others responsible for our difficulties — photographic or otherwise — whenever it is possible to do so. Now, the real test of determination to succeed is to admit that you are at fault and that you stand prepared to stand the gaff of your own conceit revealed to the public gaze.

Great care should be used to obtain the help of a person who is a *practical* photographer and one who is capable to give you the benefit of *constructive criticism*. In this connection it seems to me that amateurs in

general do not avail themselves of the many opportunities at hand, all of which are specially designed to help each and every amateur-camerist to improve and to enjoy his photographic work. One of the outstanding opportunities ever at the service of the amateur is PHOTO-ERA. We are amazed, at times, to hear the remark, "PHOTO-ERA is a fine magazine for the pictorialist, but it's too deep for the beginner." Any one who makes this remark has not read PHOTO-ERA from cover to cover, thoroughly and carefully. Every month articles of practical value and interest to amateurs appear in both the Advanced and Beginners' Competition departments. These articles are not based on theoretical—"desk"—photographic experience but on actual personal performance in nearly every branch of work including photographic merchandising. Moreover, we have at our disposal consulting-experts whose experience and opinion are accepted throughout the world as the very last word of authority. We do not for a moment claim to be infallible; but we do feel free to say that the combined experience of the Editors of PHOTO-ERA, supplemented by the authorities mentioned, places a photographic service at the disposal of our readers that should be more generally appreciated and utilized than it is at present. A fact that the amateur should bear in mind is that he should read *every* article *all the way through*, for it is well known that many an excellent idea appears in a short paragraph. Even if the title of the article does not appeal to him at first glance, it is better to read the article than to miss a valuable point that he may be waiting to find. Above all, do not continue in the belief that PHOTO-ERA excludes matters of interest to amateurs, because an inspection of any issue will disprove this assertion. However, any reader who is an amateur and who can suggest a way to improve our service is hereby asked to do so, and his suggestion will be heartily appreciated.

Another opportunity at hand for the ambitious worker lies in the many excellent books devoted to the discussion of photography in non-technical language. Although great importance must be attached to the practical side of photography, it does not follow that good books should be overlooked or disregarded as of no practical value. Any amateur who is in doubt about a book is asked to write to us, and we will be glad to suggest the one best suited to the requirements of the work in hand. No matter how much of a "photo-fan" a man may be, he never equals the "baseball-fan" as a reader of every available piece of literature devoted to his favorite pastime.

The tremendous strides that photography is making constantly demand that the amateur and professional, alike, keep informed with regard to new equipments. Manufacturers and dealers are only too glad to send catalogs and other descriptive matter free of charge to those who mention PHOTO-ERA. Few seem to realize the amount of excellent technical information that may be obtained from standard photographic catalogs. Remember that in most cases highly trained photographic experts compile these catalogs to describe as clearly and accurately as possible the equipments or accessories in question. In addition, whenever more detailed information is required for a special purpose, the camerist is ever at liberty to correspond directly with the manufacturer or dealer with regard to the work.

It is hoped that the suggestions made will cause amateurs to "get down to business" with regard to their summer's work. It is said that we learn from experience. In no activity is experience of greater value than in photography; but at the same time, to have experience and not to use it to advance is wasted time, energy and money.

A. H. B.

How Was This Print Made?

No doubt many of our readers have had an experience similar to the one mentioned below. Any suggestions will be very much appreciated.

EDITOR PHOTO-ERA MAGAZINE.

Dear Sir,—Some time ago a friend handed me a photograph of a lady and child with the request that I make an enlarged copy of the child; which appeared very easy as the child occupied the lower right-hand corner of the print with no extraneous or interfering details in proximity. But, when placed before the camera to copy—by the way, the copy negative was somewhat enlarged—I found on focusing on the ground-glass that the print was made with "Bromide Fabrie;" the question arose how to eliminate the weave of the fabrie. If I used ground-glass over the picture, it produced a soft-focus effect which my friend did not wish, as the original was sharp. I made the copy-negative direct, showing the weave in the negative, thinking perhaps I could eliminate it in the enlargement on paper with the use of a ground-glass there; but the soft-focus effect again appeared. It was now a question of experiment. Being only an amateur, I sought the advice of my supply-dealer, but he could suggest only the use of a rough paper which I did not think suitable for a child's portrait.

But by experimenting I found a way to get a good print enlarged and not showing the weave of the fabrie, except the print was taken out in the open and the direct light of the sky was allowed to fall upon it when only a slight weave-effect was discernible.

Will some of your amateur readers tell in some future issue how the finished print was made and what grade of paper was best to use; for I tried many makes and grades. The finished print was on semi-matte surface paper, as I do not use glossy at all unless for reproduction-purposes.

Respectfully,

D. A. GEYWITS.

R. R. and Anastigmat

ALTHOUGH in very many ways there can be no possible doubt as to the superiority of the anastigmatic type of lens as compared with that of earlier design, there are certain kinds of work for which, in our opinion, the purchase of anastigmats is unnecessary. For architectural and landscape work on small plates a fineness of definition is obtained at comparatively large apertures which enables short exposures to be given and negatives obtained capable of yielding crisp enlargements. In architecture, not only the crisp marginal definition, but the much greater covering-power confer advantages of a marked character, such as quicker focusing, because the rising-front is used much more than the swing-back or front, and quicker exposures, because a small stop is not essential. But when we come to larger sizes, such as 10 x 12 and 12 x 15, the advantages of the anastigmat to a certain extent disappear. For group-work, of course, the good marginal definition enables F/8 to be used where F/16 would be needed with an R. R. But in landscape and architecture stopping down is needed to obtain depth of definition with either the anastigmat or the R. R., and when this has been done it will be found that the marginal definition is good enough for direct work of that size, if indeed it is not quite equal to that given by the anastigmat. In other words, the stopping down necessary to obtain depth with a 15-inch anastigmat would equally obtain depth with a 15-inch R. R., and would at the same time eliminate any blurring of marginal definition due to curvature of field, spherical aber-

SECOND PRIZE
BEGINNERS' CONTEST



THE TEA-PARTY

LENA M. TEWKESBURY

ration and astigmatism. In such architectural work as the photographing of shop-fronts, the façades of buildings and so on, where the subject is all more or less in one plane the flat-field lens shows its advantages even in the larger sizes, as, of course, it does also in any copying-work.—*British Journal of Photography*.

One's Own Likeness

THE portrait-photographer does not need a very lengthy experience in order to learn that if there is one person who is not a competent judge of likeness it is the person portrayed; but those who, instead of being the photographers, are the photographees do not learn the lesson so quickly. Many never learn it at all, and will discuss glibly the merits of their own portraits as if they were in a position to judge properly. The fact is few of us have the power to see ourselves as others see us; and, if we had, it is questionable whether we should exercise it in criticizing a likeness. The fairest observation would be to say, "Do I really look like that?" Dickens admitted this when he said of one of his portraits that if he saw it on the wall he would not

suppose himself to be the original, adding, "I do not see myself; but I come to the conclusion that I never do see myself." Different types vary very much in the degree of resemblance which their various portraits possess. There are some faces all the photographs of which look unmistakably alike; and there are others of which half a dozen different portraits might be taken easily as representing half a dozen different people. It might not be surprising that this should apply to paintings, where fidelity to the original is not always sought and certainly is not always obtained; but it is strange that it should characterize work done with the camera to the extent which it does.—*Photography*.

Pittsburgh, Pa.

PHOTO-ERA MAGAZINE.

Gentlemen,— You will find enclosed \$2.00 for a renewal of my subscription to PHOTO-ERA MAGAZINE.

However inexperienced in photography I am, I deeply appreciate this very worthy and beautiful journal.

Yours very respectfully,

Sept. 30, 1917.

MARGARET L.



ANSWERS TO QUERIES



Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.

J. B. H.—It is admitted that a focal-plane shutter gives more light than an inter-lens one, also that the latter has advantages over the former, and *vice versa*. It would seem that the lens having the shorter focus would have the greater speed, which is based upon a well-known optical principle. Off-hand, we should say that, all conditions being equal, the camera with the focal-plane shutter would give a greater exposure, but it might be hard for you to determine this except by a scientific test.

O. S. K.—The cause of stains in your prints is the chemical impurity contained either in the mountant or in the mount. This is a common cause of discoloration of prints—a subject that has been discussed in PHOTO-ERA several times during the past years. A way to prevent staining of prints is to make your own paste, formulas for which have been published in PHOTO-ERA many times. The chemical purity of the mountant is proof against any discoloration, provided, of course, that the paper or mount upon which the picture is pasted is also free of chemical impurities. Another cause would be the print, itself, which should be thoroughly freed of every trace of hypo.

C. K. W.—An easy way to make a focusing-scale is by the following rule furnished by E. Senior in *The British Journal of Photography*: "Take some useful proportion of the focal length of the lens and lay it off from the infinity-mark, then divide the distance into two equal parts, and this again into two equal parts, and so on. If below these values we place a number which is greater by one than that which represents the number of parts that the focus has been divided into, then the focal length of the lens in inches when multiplied by these figures will denote the respective conjugate foci in inches."

H. L. O.—We note your interest in the 3½ x 5½ Compact Graflex, with F/4.5 lens, for landscape- and marine-photography. Without a doubt this camera would do admirable work, but for the work in hand we are inclined to favor a camera such as the Premo or Graphic, a 4 x 5 or 5 x 7, fitted with a ground-glass and a fairly long-focus, F/6.8, convertible lens. By convertible we do not mean necessarily a lens like the Zeiss Protar, but a lens such as a Goerz Dagor. We are in a position to know that most of the beautiful pictorial results sent to us are made with a camera of the type just mentioned, and for this reason we know that with proper manipulation excellent results may be obtained. To be frank with you, we believe that the Compact Graflex, though an excellent camera for certain requirements, is not particularly adapted to your work, since most of the high speeds with which it is equipped would be of no use to you. A good between-the-lens shutter, with a maximum speed of two hundredths of a second, would be ample. Lest we be misunderstood, we would not for one moment say that the Compact Graflex would not do good work, but inasmuch as you ask us for our opinion, we are inclined to favor the Premo or the Graphic, double-extension bellows,

drop-bed, large lens-front, rising and falling-front, and lastly, a convertible type of lens. Before going further, we would suggest that you write to the Eastman Kodak Company for their Premo and Graphic catalogs.

C. O. F.—With regard to metol substitutes, we can state that there are several good ones on the market to-day, manufactured by reputable concerns. Most of them, however, seem to be a little slower in action than the regular metol, and have a tendency to produce rather contrasty prints when developed in the same time as when using regular metol. Greater care should be given to the temperature of the solution. It is possible to purchase the original metol, but at prices which make it prohibitive, and then not in any quantity.

E. L. A.—The yellow color of your old Azo paper is probably due to long washing in water which, possibly, contains iron. Oxalate, one to ten parts of water, will remove these stains in five minutes or less. The oxalate will have no injurious effect, but may soften the print a trifle. It should be washed for a few minutes after this treatment. We have no formula with regard to using glycin to avoid the yellow stain you speak of. The only formulae we know are those that have already been published. These, we believe, should prove satisfactory, unless your trouble might have been due to weather conditions, when the solution might become too warm. Sometimes an excess of carbonate will cause trouble.

K. T. S.—Soda salts, such as carbonate and sulphite, should be anhydrous, as they are less readily affected by the action of the air. Sulphite, for instance, is gradually oxidized to sulphate with a consequent lowering of the percentage of sulphurous acid, which impairs its preservative effect. On the other hand, the dry salt has a slight tendency to absorb moisture and harden, but this disadvantage is small in comparison with the change in composition of the crystals, because the lumps may be broken up readily.

In solution, anhydrous sulphite keeps no better than crystal. To test either salt for purity, add a little hydrochloric acid to a solution and then a few drops of barium chloride solution. A milkiness or precipitate denotes the existence of sulphate, which acts as a restrainer in the developer. Sulphite solution over one month old should not be expected to be full strength unless made with distilled water and kept in full, well-stoppered bottles.

The exact strength of anhydrous sodium carbonate can be assured by heating it in a basin over a spirit-lamp, any moisture being driven off. As the anhydrous salt readily absorbs ten percent of moisture it should be kept in well-stoppered bottles.

A. J. V.—Most developers oxidize and darken in the light and air, some of them more than others, and much more rapidly in solution than in a dry state. This accounts for the use of orange-glass bottles, paraffined stoppers, and sulphites and acids as preservatives in solutions. It is a wise precaution to keep solutions in orange-glass bottles as well as the dry developer itself, or else to store it in a dark place.

Pyro discolors rapidly in solution unless preserved under as nearly perfect conditions as possible. There seems to be a growing belief that potassium metabisulphite is the best preservative. Hydroquinone keeps well in solution, as does metol in the presence of alkaline sulphites. In a solid state metol keeps indefinitely. Potassium metabisulphite crystals oxidize upon exposure to air, although more slowly than sulphites. In doing so a white powder forms on the crystals, which should be removed before the crystals are used. The salt should also have a strong sulphurous odor.



PRINT-CRITICISM



Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.

K. S.—The picture of the young lady in *negligée* costume may have been very pleasing to the eye, with the setting of shrubbery and the spirit of summer. In photography, however, these subjects are sometimes disappointing. The ivory is intricate and spotty in design and detracts from the figure, which, in dress and body, is altogether too white, suggesting a coating of white-wash. This is due to the lack of true color-values, which might have been secured by means of a ray-filter. You will agree that the figure is more of a chalky white than you saw it in nature.

A. B. H.—Your picture is very spotty. The foreground is composed of three not very attractive looking white masses of stone. The middle distance is quite spotty and the background is out of drawing. The figure in the landscape is quite white, also the fishing-rod. This is not a very artistic treatment of the subject. The entire picture seems to lack harmony and pictorial design.

T. A. C.—There is no doubt that in some so-called salon exhibitions your picture might meet the approval of some painters who do not believe in photographic sharpness and who are inclined with enthusiasm towards any photograph that is indistinct or obscure; but drawing or the correct representation of objects and outlines is essential to good photography.

F. W. K.—Your print, "The Rabbit-Hunters," is a fair winter-landscape, but the figures are not placed with the best judgment. It is not apparent that they add anything to the landscape—in fact, I think that the landscape would be better without them. The figure at the left is virtually walking out of the picture, as though out of sympathy with the motive of the photographer. Also, the picture shows scratches in the sky, due probably to carelessness in manipulation.

H. A. C.—By "drawing" in photography, we mean the correct representation or delineation of objects. This is not as apparent as it should be in your picture of the woodland-path. The general appearance is somewhat indistinct, as we would not see it in nature unless our glasses were dimmed by dust or we held a piece of cheese-cloth between the subject and our eyes. It is flat and lacks life, some would say "sparkle," and looks as if you had not done justice to this beautiful subject.

M. K.—Your indoor-portrait of a man, which you have facetiously termed "Fuzzygraph," is not a fuzzy-graph at all. True, the outlines are softened, but it is very excellent, indeed. The lighting on the face is particularly good.

K. M.—"The Work of Man" (a landscape with lily-pond in foreground) is technically attractive and interesting; but the composition is not good, as the tree is exactly in the middle of the upper part of the picture. The pictorial interest is scattered. It should be either in the pond or on the shore with the trees. Why not obliterate the black and intrusive tree-trunk in the negative? Subdue the two white posts in the immediate foreground and enlarge the negative with a



GOING FOR A SWIM

ARTHUR H. FARROW

THIRD PRIZE — BEGINNERS' CONTEST

soft-focus lens. The result would be very pleasing.

P. K. M.—Your picture, "Twilight Shadows are Falling," is very good, except that you should avoid *absolute blacks*, for no absolute blacks exist in nature, even during the darkest night. Please observe the various nocturnal effects and you probably will arrive at the truth of this statement.

H. C. S.—The picture of the little boy, entitled "His Best Present," is not convincing. It is the picture of a boy standing upright on a settee and dressed cap-a-pie entirely in white. The only thing that is not white is his shoes. His pallor would indicate that he has no color, whatever. The masses of white belonging to the furniture are very confusing and inartistic. It might have been better had the boy been in a dark costume, and if, instead of standing on the settee, he had been seated on the floor amid natural surroundings, and holding the toy in such a way as to indicate that it was the chief object in the picture—according to the title.

C. P. L.—Your outdoor picture of a young woman squatting stiffly on the ground is marred chiefly by her large, ugly, white hat. What is supposed to be a tree, in the background, has lost its shape, form and detail. Without meaning any disrespect, I should say that the pose of the model is somewhat stiff and uncomfortable for one who is lost in "day-dreams." Furthermore, there is no indication—of course, only indirect—of the lower limbs of the model. This is unfortunate, because the position might have been different, also more pleasing and convincing. The background is confusing and without shape or form, in undue contrast to the figure, whose head is in complete shadow.

Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of the time in the table. From 8000 to 12000 feet use $\frac{1}{2}$ of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

*These figures must be increased up to five times if the light is inclined to be yellow or red.

†Latitude 60° N. multiply by 3;

55° × 2; 52° × 2; 30° × $\frac{3}{4}$.

‡Latitude 60° N. multiply by 2;

55° × 2; 52° × $\frac{1}{2}$; 30° × $\frac{3}{4}$.

§Latitude 60° N. multiply by $\frac{1}{4}$;

55° × 1; 52° × 1; 30° × $\frac{1}{2}$.

§Latitude 60° N. multiply by $\frac{1}{4}$;

55° × 1; 52° × 1; 30° × $\frac{1}{2}$.

MONTH AND WEATHER

HOUR	JAN., Nov., Dec. †					FEB., OCT. ‡					MAR., APR., AUG., SEPT. §					MAY, JUNE, JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
11 A.M. to 1 P.M.	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
10-11 A.M. and 1-2 P.M.	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
9-10 A.M. and 2-3 P.M.	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	1^*	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	1^*	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$
8-9 A.M. and 3-4 P.M.						$\frac{1}{5}$	$\frac{1}{2}$	1^*	$1\frac{1}{2}$	3^*	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$
7-8 A.M. and 4-5 P.M.											$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$
6-7 A.M. and 5-6 P.M.											$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1^*	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
5-6 A.M. and 6-7 P.M.																$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$	$1\frac{1}{2}^*$

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

SUBJECTS. For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, to glades and under the trees. Wood- interiors not open to the sky. 48 Average indoor-portraits in a well-lighted room, light surroundings.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

For Perpetual Reference

For other stops multiply by the number
in the third column

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

U. S. 1	F/4	× 1/4
U. S. 2	F/5.6	× 1/2
U. S. 2.4	F/6.3	× 5/8
U. S. 3	F/7	× 3/4
U. S. 8	F/11	× 2
U. S. 16	F/16	× 4
U. S. 32	F/22	× 8
U. S. 64	F/32	× 16

Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply $1/16 \times 4 = 1/4$. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. $1/16 \times 1/2 = 1/32$. Hence, the exposure will be 1/32 second.

Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.
Ilford Monarch
Lumière Sigma
Marion Record
Seed Graflex
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.
Anseo Speedex Film
Barnet Super-Speed Ortho.
Central Special
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Imperial Special Sensitive
Seed Gilt Edge 30
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.
Barnet Red Seal
Cramer Instantaneous Iso.
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Ilford Zenith
Paget Extra Special Rapid
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.
American
Anseo Film, N. C.
Atlas Roll-Film
Barnet Extra Rapid
Barnet Ortho. Extra Rapid
Central Comet
Imperial Non-Filter

Imperial Ortho. Special Sensitive
Kodak N. C. Film
Kodoid

Lumière Film and Blue Label
Marion P. S.
Premo Film-Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulean Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso. Speedy
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.
Cramer Banner X
Cramer Isonon
Cramer Spectrum
Defender Ortho.
Defender Ortho., N.-II.
Eastman Extra Rapid
Hammer Extra Fast Ortho.
Hammer Non-Halation
Hammer Non-Halation Ortho.
Seed 26x
Seed C. Ortho.
Seed L. Ortho.
Seed Non-Halation
Seed Non-Halation Ortho.
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.
Cramer Anchor

Lumière Ortho. A
Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.
Cramer Medium Iso.
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.
Barnet Medium
Barnet Ortho. Medium
Cramer Trichromatic
Hammer Fast
Ilford Chromatic
Ilford Empress
Seed 23
Stanley Commercial
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.
Cramer Commercial
Hammer Slow
Hammer Slow Ortho.
Wellington Ortho. Process
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.
Cramer Contrast
Cramer Slow Iso.
Cramer Slow Iso. Non-Halation
Ilford Halftone
Ilford Ordinary
Seed Process

Class 100, P. E. 11 Wy. 3, Wa.
Lumière Autochrome



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

A New Photo-Era Contest

MANY of our pictorial contributors evince so high a degree of intelligence in their criticism of pictures in general that, in order to encourage and help develop this valuable faculty, we shall introduce a new competition beginning with this issue. It consists of the reproduction of an excellent photograph, but not perfect in composition. To those who send us the best criticism, before the twentieth of the current month, we shall send, postpaid, a copy of "Pictorial Landscape-Photography," by Paul Lewis Anderson. In the event of several replies being satisfactory, several prizes (the same book), not exceeding three, will be awarded.

The successful replies, not to exceed one hundred and fifty words, together with the picture criticized, will be published on this page in the second succeeding issue.

The subject of composition in landscape-photography is one that interests every camerist. Naturally, more exposures are made of landscapes than of any other outdoor-subject. The main thing to be remembered is the principle of simplicity and harmony. Mr. Anderson is an eminent exponent of pictorial photography in its highest sense, and he has never appeared to better advantage than as the illustrator of his now celebrated work, "Pictorial Landscape Photography." The book is devoted to an exhaustive analysis of the qualities that are necessary to a successful open landscape, in summer or in winter, wide country-road, a view with a stretch of water or to a landscape with a single figure as accessory, as shown in fourteen full-page halftone plates.

Successful Criticisms

THE picture offered by Mr. Hasse for criticism, though technically good, is lacking in unity, simplicity and singleness of interest.

The main highlight is divided by the gnarled lower limb of the oak to the left in such a way that a very disturbing effect is produced.

The placing of the figures is unfortunate. The left of the two men wears a very effective female hat, formed by the rock beyond, and the attitude of the one to the right completely divides the interest.

The boat in the middle distance, far to the right, serves no purpose save to further distract and confuse the eye. Trimming fails to enhance or harmonize the pictorial effect. Remove the offending lower limb, the distracting boat, the purposeless figures and Mr. Hasse would have recorded a very pretty bit of Central Park.

II. C. COWLES.



IF "Your Criticism Invited" is truly the legend of this picture, the presentation of two unrelated figures admirably carries out the leading idea and invites the criticism deserved. The men are not concerned with each other, nor with anything in the picture. The left figure, moreover, is very unfortunately placed in front of the large stone.

The lower limb of the tree serves only a scientific purpose in establishing the identity of the tree as the red oak. It crosses the picture in a discordant manner.



THE PICTURE CRITICIZED THIS MONTH

Its base resembles a channel in a frozen stream, and its apex divides the scene, the vista containing the boat and the landing constituting distracting elements. Removal of this limb leaves one in better position; but it also is unattractive on account of the defoliation at the outer end.

W. H. LAMB.

TECHNICALLY a good picture, savoring more of the "snapshot" than the "picture worth while." Its chief defect is its divided interest — several widely separated points of interest attract the eye and give a confusing effect to the composition. The view has pictorial quality, but the branches detract from the more beautiful part and hold the eye from entering the picture. Perspective and sense of distance are commendable. The tone is soft and pleasing — the quality of water well rendered. View-point was poorly chosen — too much emphasis has been given to the tree. The partly bare branch extending to the edge makes a poor object to fix attention on. It upsets the balance. Parallel lines running across and out of the picture are a bad feature. The pose of the left figure is poor — the rock suggesting a new kind of headgear.

ARTHUR H. FARROW.

THIS is in many ways a pleasing picture. The scene is an attractive one, the print, or rather the reproduction, has good atmosphere and the tone-values seem about right. The horizontal branch cutting the picture in half is the worst feature, and trimming does not seem to help it any. A little more foreground would be desirable, to give stability. What appears to be a stone in the water, giving a peculiar appearance to the head of the left-hand figure, could be removed with a little hand-work on negative and print.

On the whole, a position of the camera nearer the figures, and pointing slightly down, so as to include more foreground, thus bringing the branch near the top

of the picture-space, would no doubt have given a better arrangement.

JOHN DOVE.

THE picture on page 152, PHOTO-ERA, seems to be composed of three distinct parts — upper, middle and lower — and the eye wanders, for neither part attracts the eye enough to hold it. This is caused by the presence of the figures at the foot of the tree. Remove the figures, and the eye settles on the middle of the picture and then on to the distance, and the composition is then not unpleasing. The picture seems to have an empty look, on account of the large, open space below the lower branch, and seems to need something *added* to "fill up;" but, oddly enough, *subtraction* of the figures seems to give the same result, and the empty look seems to disappear. A minor point is the objectionable boat, with two persons, at the right.

W. H. BLACAR.

THIS is my criticism of the landscape on page 152. Saw off the snake-like branch creeping across the middle of the print. Direct the interest of the men up the lake to the most distant shore. Before making the exposure, Mr. Hasse should have waited until the boat to the right had moved away; it is unnecessary and detracting.

On the negative, tone down with pencil the upper branch so that it will not stand in violent contrast against the white sky which it crosses; likewise the smaller stick crossing the upper right-hand corner of the print. Darken the distant mass of woods to the right, extending toward the center of the print as far as the first point of land. Likewise, strengthen the two already existing points of reflection in the water to the right of the center of the print, which extend almost to the foreground shore. Eliminate the light spots at base of the tree, in the left-hand corner.

M. W. REEVES.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



IN the unrestrained freedom of the home, the tousled, dark-eyed little maiden, page 220, proved a willing though somewhat impatient camera-subject. Mr. Schwarz seems to have the faculty to obtain the confidence of the little ones, either in the home or in his studio, and with the aid of his superior artistic skill to picture their touching innocence and *naïveté* in a delightful way. His technical resources fully meet the requirements of these tasks, which are frequently difficult, and this issue's frontispiece furnishes a notable example of his abilities. After applauding the wisdom of the artist's thematic selection, one is quick to admire the beauty of treatment, the skilful distribution of the light and the true rendering of the flesh-tints. Data: Light from window; 5 x 7 Century view-camera; 10½-inch B. & L. Unar; stop, F/5; no color-screen; Seed 30 plate; M. Q. developer; 7 x 9 Royal Bromide print.

One of the prettiest sights in New Hampshire is Goodrich Falls, near Jackson, a popular summer-resort. It is the work of nature, modified by the hand of man in the construction of the dam above the falls. The view from below, as pictured by Mr. Ford, page 229, separates the falls from the surrounding country, and presents a compact, pictorial theme; although, as seen from an elevation back of the present viewpoint, the fall is the principal attraction of an extended and impressive landscape. The present view, as well as the time of day, has been chosen with excellent judgment, and is happily devoid of that stiff, symmetrical setting that marks the photographs of similar subjects. Data: September, 11 A.M.; sunlight; 5 x 7 Century camera; 8½-inch Goerz lens; stop, F/16; ½ second; Standard Orthonon; Eastman Special Developing-Powders; direct Regular Velvet Velox print.

Nothing is more thrilling to the eyes of the yachtsman than the sight of a finely modeled craft in a spanking breeze. In this department of marine-photography none is better known and more highly esteemed for his intimate knowledge of yachts, and his success in picturing them advantageously, than F. A. Walter, of Brooklyn. This must be obvious to any intelligent beholder of the extremely beautiful picture, on page 235, of the yacht *Resolute*, which, it will be remembered, was selected to defend the *America's* cup against the yacht sent over here by Sir Thomas Lipton, in 1914. On account of the European war, however, the event did not take place. Inexperienced photographers of sailing-craft will profit by studying this picture, with sail and mast in perspective, the leeward side in shadow and the sunlight just touching the huffs of the sails. Everything is in focus, from the crew on the deck to the topmast truck; for the owners of the craft prized every inch of this superb craft, and in the photograph nothing must be slighted. They naturally would have no objection if an outsider wished to make the *Resolute* the subject of a pictorial photograph, but which, however artistic, would not be likely to elicit their personal approval. Data: July, 2.30 P.M.; full sun; 8 x 10 hand-set focus camera; 13-inch Ross Rapid Symmetrical; stop, F/14; 8 x 10 Standard Inst. (E. K. Portrait); ⅓ second; pyro; direct Cyko print.

Arranged as a horizontal panel, Mr. Hartley's view of Pike's Peak, from Manitou, page 236, appears as an impressive, well-balanced picture. Bereft of a deep foreground, the mountain does not look its height; in-

deed, the tendency is to dwarf the comparative size of this, one of the tallest mountains in Colorado. However, pictures of Pike's Peak, by Mr. Hartley, that gave an excellent impression of its great height (14,108 feet), have already appeared in these pages. Data: June, 3.30 P.M.; bright sun; 5 x 7 Century camera; 8½-inch Cooke Anastigmat; B. & J. 3-time ray-filter; Orthonon; metol-hydro.

For artistic arrangement, judicious lighting and sympathetic treatment of a group of flowers, Mrs. Souther's picture of asters, page 237, is eminently worthy of praise. Where so much time and effort are given as to the photography of flowers—a subject that cannot but invite the skill of most camerists—it is really astonishing how comparatively few efforts are successful artistically. And yet the makers of these disappointing pictures may be just as fond of flowers as the successful ones. To appreciate fully the difficulties that attend the artistic portrayal of a floral theme, like the one treated by Mrs. Souther, let the novice merely suppose that the subject represents a group of persons— itself the most difficult problem in the entire realm of portraiture. He will then realize the necessity of a common interest—unity and harmony. To let each member of the group be independent of the other would be fatal to the integrity of the composition. In some groups, such as an executive board or a committee, the interest centers in the chairman, and the rest are subservient, and yet not one member is really slighted. In the picture before us it is obvious which is the principal flower of the group—it is almost human in aspect, for it reminds the Editor of a famous painter, a man with white, shaggy hair and beard. Slightly above is a companion, which is somewhat in shadow, therefore less prominent. The topmost one appears smaller and is a trifle less sharply defined and less strongly lighted. The one to the left receives the full force of the light, but is represented in profile. The fifth, diagonally below its chief, is partly in the light, but mostly in shadow, yet invaluable in completing and balancing the group. The dark leaves and stem constitute the base of the group, so that we have a complete, consistent and harmonious composition, replete with character and beauty. Data: Early October, 4 P.M.; one north window, partly screened; 5 x 7 Century view-camera; R.R. Convertible lens; stop, F/22; 20 seconds; Standard Orthonon; pyro; direct print on Azo Grade A double weight.

The work of George Krause may not be seen in the photographic salons of either hemisphere, but he is nevertheless a pictorialist who deserves to rank with the best. The several pictures from his portfolio that Photo-Era has had the pleasure to publish, and, particularly, the one which graces page 239, give evidence of this statement. In choice of theme, composition and treatment, "A Misty Autumn-Morning" is but the expression of a thoroughly artistic temperament. The boldness and dignity of the design, the beauty of atmospheric perspective and the mastery of technical difficulties command admiration. Data: September, 6-7 A.M.; 2¼ x 3¼ Ica Bébé camera; 4½-inch 1C Zeiss Tessar; stop, F/4.5; ⅓ second; Seed Non-Halation Ortho.; M. Q. developer; print on Cyko-Enlarging.

The resources of the versatile artist-author, William S. Davis, seem well-nigh inexhaustible. The readers of Photo-Era are treated this month to an entertaining

and practical paper on a popular subject of which few workers have a thorough knowledge. The illustrations reflect Mr. Davis' supreme artistic powers, and the subjoined data should enable any intelligent camerist to produce similarly true and attractive moonlight-effects. Data: "On a Winter's Night," page 240 — Exposure, 30 minutes, commencing at 7.12 P.M.; clear moonlight on the subject; 6-inch Hex anastigmat at full aperture of F/6.3; Roebuck Double-Coated Ortho. plate, $3\frac{1}{4} \times 4\frac{1}{4}$. "Night-Shadows," page 241 — Exposure, 30 minutes, beginning at 6.30 P.M.; Hex lens at full aperture; Wellington Anti-Screen plate. "Edge of the Woods," page 242 — June 21; exposure, 5 minutes, beginning at 7.45 P.M.; a little light from the afterglow softened the shadows; hazy; R. R. lens; stop, F/8; $3\frac{1}{4} \times 4\frac{1}{4}$ Cramer Inst. Iso. plate; moon taken later on separate plate. "The Silver-Gleam," page 242 — June evening; slightly hazy; exposure, 20 minutes, beginning at 9.45 P.M.; $7\frac{1}{2}$ -inch R. R. lens; stop, F/8; Cramer Inst. Iso. 4 x 5. "May Evening," page 243 — May, the night before full moon; 18 minutes for landscape, beginning at 7.40 P.M.; R. R. lens, F/8; Inst. Iso. plate. The moon received a separate exposure of 20 seconds upon the same plate, the camera-bellows being drawn out to increase its size. All plates developed with pyro.

The Green Mountains of Vermont may not compare favorably with other ranges of the East in height of grandeur, but as pictured by L. F. Brehmer, of Rutland, they yield nothing in beauty to their superiors. "Otter Creek Valley," page 245, is a scene filled with pictorial interest, and, despite the road in the foreground abruptly hurrying away, hangs very well together. The group of trees, at the left, counteracts this violation of artistic etiquette, to a considerable degree, and forms an integral part of a landscape over whose beauty the eye wanders with delight — over river, meadow, wood and hills, and up into cloudland. The perspective, from the near-by road to vanishing mountain-peak, has been admirably rendered. The same is true of the values throughout. Data: June, early afternoon; good light; 5 x 7 Korona view-camera; 7-inch, series VII A, Zeiss; stop, F/32; 3-time color-screen; 5 x 7 Standard Ortho.; pyro; direct print on glossy Cyko.

As a diversion from his brilliantly realistic representations of nature-subjects, H. C. Mann contributes his "Dream of Silence and of Peace," page 246. The theme seems to be in perfect accord with the idea he had in mind, and has been treated quite sympathetically. The scene expresses a sense of quietude characteristic of the locality on a typical winter-day. The play of light and shade on the smooth snow is very beautiful, and the few isolated trees, just disappearing over the edge of the hill, add to the feeling of suggestion interpreted so well by the artist.

Advanced Workers' Competition

DESPITE the fact that the entries in the "Miscellaneous" competition for advanced workers are eminently varied in choice of subjects, the highest two prizes in this class, for August last, were awarded to portraits. Dr. Kilmer's successful entry, the portrait of a young, full-blooded Indian, page 249, received the highest award, largely on account of its departure from the conventional in portraiture. No intelligent observer can fail to be impressed by its strength of presentation, the psychological quality of the subject's personality and the adherence to visual truth in drawing and values. This unusual portrait is one of several published in PHOTO-ERA that have helped to establish Dr. T. W. Kilmer's reputation as this country's amateur portraitist *par excellence*. As an eminently successful portrait is but the culminating expression of a paint-

er's versatile genius, so does the portraiture of Dr. Kilmer represent the highest development of his artistic powers. He has shown equal pictorial facility in landscape and genre, but these fields of ardent endeavor were but stepping-stones to the goal of his artistic aspirations — portrait-characterization. Data: Cooper Hewitt light; 18-inch Verito; stop, F/5.6; 6 seconds; 8 x 10 Stanley; pyro; contact-print on Certura E.

It would be difficult to determine to whom the characterization "the bravest of the brave" should be applied, when so many patriotic men and women are eagerly risking their lives at the battle-front to help save the glorious principles of democracy. There are many who are disposed to concede the palm for personal bravery to the Red Cross women, who, more than ever, are exposing themselves to attack from brutal aircraft — contrary to all rules of international law. Therefore, no one will disapprove, when the honor is accorded to the Red Cross nurse, as portrayed by Leander Miller, page 251. It certainly is a beautiful presentation of the subject, who is a member of a regular Red Cross unit. Since the picture was made, the artist, who is a professional home-portrait photographer, has enlisted in Uncle Sam's forces. Data: Home portrait, with light from ordinary window; June; Le Tessar, at F/5.6; 2 seconds; 5 x 7 Eastman Portrait-Film; pyro; 8 x 10 enlargement with Verito lens on P. M. C. Bromide No. 8. See front-cover.

The charm of Paul Wierum's marine, page 252, lies as much in the beautiful green tone of the original carbon-print as in the sympathetic interpretation of the theme. There, one can appreciate fully the soft atmospheric quality and poetic feeling that are difficult to preserve in the halftone; and, there too, the ordinary observer will be likely to object to the divided interest in the composition, or, indeed, to detect the seeming tendency of the water-line to run uphill — a circumstance due, probably, to careless trimming. Data: August, 6.30 P.M.; medium light; No. 1 Special Kodak, $2\frac{1}{2} \times 3\frac{1}{2}$; $3\frac{1}{2}$ -inch Zeiss-Tessar; Eastman 8 x color-screen; stop, F/5.6; $\frac{1}{50}$ second; Eastman film; M. Q. tube; Cyko Buff print.

Beginners' Competition

IN contemplating Mr. T. D. Fields' picturesque version of Yosemite Falls, page 255, one is reminded of the superb view of the same subject, by Herbert W. Gleason, that embellished the September issue, and which affords an unrestricted survey of this, one of Nature's most sublime spectacles. Mr. Fields, on the other hand, has chosen a delightful setting for his subject, and one that would make a popular appeal were he to commercialize it. While the whole effect is pleasing, it does not appear to impress one with the full grandeur or even the tremendous height of the descending waters. The foliage that supplies the upper part of the setting is a little insistent by its unnatural blackness of tone. The workmanship is impeccable. Data: May 8, 1917, 11 A.M.; bright sun; Eastman 3A Special Kodak; Zeiss Kodak Anastigmat; stop, F/8; $\frac{1}{100}$ second; Eastman Speed-Film; tank development; contact print, Blue Label Studio Cyko.

Miss Tewkesbury achieved an eminent success with her portrayal of children at play, page 257. It is convincingly an impromptu exposure, a sort of surprise of the "tea-party." The group is not posed, therefore the action is spontaneous, and correspondingly charming. As evidence of lack of deliberate preparation is the slanting appearance of the furniture of the apartment. The fidelity of action and expression, also the

(Continued on page 270)



ON THE GROUND-GLASS

WILFRED A. FRENCH



Repairing a Rare Daguerreotype

BALDWIN COOLIDGE, the veteran photo-specialist, who has restored hundreds of priceless daguerreotypes, told me of an incident that illustrates the perversity of human nature. A gentleman of Cambridge, Mr. X., a descendant of a distinguished family, brought him a daguerreotype of his mother to be copied—several years ago. The portrait was made in 1845 by one of the masters of Daguerre's art, and, as it had been shown very frequently during a period of seventy years, it had acquired a faded look—a common surface-condition that will yield quickly to expert treatment. Nevertheless, Mr. Coolidge copied the picture just as it was and, a few days afterwards, delivered it to its owner, together with the negative and ten prints, at the same time suggesting that the daguerreotype be cleaned. The owner declined to consider the proposition, though Mr. Coolidge assured him that the process was simple and absolutely safe, likewise inexpensive. The seion of a noble family said merely that he would think the matter over. Thereupon Mr. Coolidge explained that, although he was not eager to do the work, it should be entrusted only to a recognized expert.

Several days afterwards, Mr. Coolidge was called to the telephone, some one inquiring if he could restore a daguerreotype that had been damaged. Mr. Coolidge replied that this depended entirely upon the nature of the injury, but that in many instances the damage had proved to be irreparable. "Very well, I'll bring it to you," was the final remark of the inquirer. A little later, a young man entered Mr. Coolidge's studio. He was very much disturbed, the apparent cause being a daguerreotype-ease which he held clutched in his hand. He stated that he conducted a second-hand camera business in Bromfield Street and that, several days previously, a gentleman, after purchasing a used equipment, had asked him if he could clean a daguerreotype. As the answer was in the affirmative, he left it.

Continuing, the camera-dealer said: "I was very busy the next day, so I gave it to my assistant, a young chap who occasionally develops and prints films for customers, and asked him to clean it, which he did." And with trembling hands he opened the daguerreotype-ease, displaying a virtually *plain silvered surface*. "Is this the daguerreotype your assistant said he cleaned?" Mr. Coolidge asked with apprehension, recognizing the ease by its distinctive appearance. "I'm sorry it is. But can't you restore the picture that my assistant seems to have cleaned off?" anxiously asked the visitor. "No; never!" answered Mr. Coolidge sharply. "The surface of a daguerreotype is more delicate than the wing of a butterfly; the slightest touch of the finger will cause a blemish that can never be repaired. If let alone, the daguerreotype you have destroyed would have lasted several hundred years more. It has gone forever now—like the soul of a man who has died. As for Mr. X.—he has paid the price of his folly."

Mr. Coolidge deprecated the habit of certain photographic journals of publishing methods to restore injured daguerreotypes, advising that amateurs practise them. Although these methods are generally trustworthy, they should be severely let alone by inexperienced persons, for the least slip is likely to spell disaster.

Honoring Antoine Lumière in 1907

ANOTHER anniversary of November 7, 1907, the date of the reception and dinner given by the Publisher in honor of Antoine Lumière, the father of the Lumière brothers, Louis and Auguste, and, until his death, several years ago, the technical director of the factory at Lyons. The dinner took place in the Hotel Brunswick, Boston, at which were present Monsieur Lumière; Professor Charles R. Cross and Professor Louis Derr, of the Massachusetts Institute of Technology; Professor F. M. Gilley, of the Chelsea High School; Edward H. Clement, journalist; John Ritchie, Jr., president of the



ANTOINE LUMIÈRE

Boston Scientific Society; F. M. Steadman, photographic expert and investigator; J. H. Garo, Morris Burke Parkinson and Alfred T. Barraud, professional photographers; Horace B. Pearson, amateur photographer; C. Poulailon and J. E. Brulatour, of the Lumière agency, New York; E. G. Noble, special writer of the *Boston Herald*, and the host, Wilfred A. French.

Shot at Sunrise

"I SIMPLY must air my views," said the photographer, as he dried his films.—*Froth*.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



The Convention of New England Photographers at Providence, R. I., September 25-27, 1917

THE nineteenth annual convention of the Photographers' Association of New England took place, as planned and announced, September 25, 26 and 27, 1917, in Infantry Hall, Providence, R. I.

In most respects the event was like the others that have preceded it. It was characterized, however, by a serious, businesslike air and the fact that something practical was being done every moment, and that those who were present throughout the first two days went home with a feeling of satisfaction. The hall was by far the largest and best-lighted in which a New England convention had been held, so that the two hundred persons present gave the impression of a much smaller number. The two longer sides of the hall were given up to the now indispensable picture-exhibits of the Eastman Kodak Company and the Ansco Company, and the only way to display the official and complimentary exhibits of prints was on each side of two large wooden screens, which were inadequate to accommodate the large number of pictures contributed. No doubt this deficiency will be remedied, so that at the next convention, which will be at Springfield, Mass., the state, personal, complimentary and competitive exhibits may all be hung and arranged systematically and advantageously. But this can be done only if contributors send in their pictures sufficient time in advance, according to the rules, and not a day or two before the opening of the convention, as was done by not a few photographers. The work of the secretary is hard and complex enough without being needlessly increased by thoughtless or forgetful members.

A commendable atmosphere of good fellowship prevailed throughout the convention and also at the banquet and the excursion to Newport. The pinch of hard times did not prevent members of the Association living in the far sections of Maine, Vermont and New Hampshire from being on hand; and the convention proved sufficiently important to attract photographers, many of national renown, from neighboring states.

The official program was carried out as planned, but force of circumstances compelled a few minor changes, some for the better and some otherwise, as, for instance, the enforced absence of Mr. Garo, which was sincerely regretted, particularly by some who were to meet him for the first time; likewise that of a number of invited guests living at a great distance from New England. It was not expected that all would be present, yet a goodly number of them made their appearance, and they seemed to be well repaid for the effort.

The treasurer reported about 150 paid admissions, which, together with fifty who had settled with the treasurer before the convention, made the total of members in attendance about two hundred. This compares favorably with previous conventions.

Besides the picture-exhibits of Ansco and Eastman were those by the Cramer, Hammer and Seed Dry-Plate Companies, the Wollensak Optical Company and the several portable skylight firms. Of photographic apparatus there was but one large exhibit, viz., the Robey-French Company, of Boston, whereas other manufac-

turers and dealers were content with desks in charge of capable representatives.

The First Day

President Hanson called the meeting to order at 11 A.M., and after the address of welcome, by Mr. H. Nelson Street, of the Chamber of Commerce, and representing the mayor, the usual preliminary business was transacted. This was followed by two-minute talks on "What is my greatest business-asset?" in which the following-named members participated: M. D. Hanson, A. E. Whitney, Roger Paul Jordan, of Portland, Me.; Miss Hallie Wilson, of Berlin, N. H.; Ryland W. Phillips, of Philadelphia, Pa.; Will H. Towles, of Washington, D. C.; S. Schein, of Chelsea, Mass., and Walter Fenley, of Portland, Me. The morning-session closed with an address by Ryland W. Phillips, president of the National Association, his topic being the suggested coöperation of the National Secretary with the amalgamated associations, including the New England Association, for annual dues of five dollars, in order to save so many dues as at present, expenses in preparing special manufacturers' exhibits, procuring special talent, and in other ways condensing now scattered efforts. No action was taken.

In the afternoon J. W. Beattie (of the G. Cramer Dry-Plate Company), "who has a way with him," gave a demonstration on the stage of how to manage and pose little children, exposing a number of plates. His efforts were rewarded with hearty applause by a large and interested audience. E. R. Trabold, of Wallingford, Conn., demonstrated the exclusive use of artificial light for sittings, and D. C. Shoberg explained his portable skylight, both gentlemen preceding Mr. Beattie.

In the evening, before a large and appreciative gathering, an exceedingly interesting and profitable lecture on "Light and Shade" was given by Will H. Towles, of Washington, D. C. The lecture was illustrated with many beautiful lantern-slides, but because the stereopticon lacked the usual water-jacket, the heat generated cracked most of the slides. The rest were saved from injury by being hurried through the lantern. Mr. Ryland Phillips then followed with an interesting talk on photography and a general boosting of the profession.

The Second Day

Besides the reading of reports by committees, the secretary and the treasurer, the election of officers took place, with the result given below. The next place of meeting chosen was Springfield, Massachusetts. Mr. J. Klenc, of the Bachrach Studio, Boston, gave a practical talk on studio-system, and scored a success. In the afternoon, one event quickly followed another. Mr. Garo's place, in criticizing the picture-exhibits, was graciously taken by Pirie MacDonald, of New York. As he went from picture to picture, he was followed by a large crowd eager to absorb every word of his valued comments. This feature, alone, was regarded by many as well worth the time and expense of attending the convention.

In the studio-skylight-room — a commodious apartment arranged and equipped by Secretary Whitney to meet the requirements of practical demonstrations by an expert photographer — Will H. Towles explained, clearly and convincingly, his method of obtaining

beautiful effects in lighting. The keen interest shown by the large audience present, and the frequent applause accorded the artist-speaker from Washington, proved the value of the demonstration. The crowd then transferred its interest to a series of practical illustrations of studio- and house-portraiture on the stage, conducted by T. E. Hallderson, with his firm's Portable Home-Portrait Flash-Lamp and several very attractive girl models, on whom he exposed twelve 8 x 10 Eastman Portrait-Films. His success was so marked that when he had finished he was kept busy taking orders for his equipment. Immediately afterwards, energetic J. P. Haley, of Bridgeport, Conn., entertained an eager crowd in the enlarging-room, explaining his son's method of producing artistic and unique enlargements of the sketch-variety. Thence, the crowd surged towards a corner in the large hall where Harold Dyke revealed the mysteries of working in backgrounds on portrait-negatives, while, not far away, another perspiring group was watching S. W. Frazer perform practical and convincing feats with the air-brush. A little later, Ryland W. Phillips, the Philadelphia spell-binder, was dispensing valuable advice in the official darkroom. All these treats were limited to twenty-minute periods.

Manufacturers and Dealers

The manufacturers and dealers represented were as follows:

The Ansco Company, with a display of prints in Cyko paper, arranged against tall mahogany screens, extending almost the entire length of one side of the hall. The artists whose work on the several grades of Cyko paper was shown here to admirable advantage were Lewis & Smith and Eugene Hutchinson, of Chicago; Dr. Arnold Genthe and Hiller, of New York; Walters, of Newark, N. J.; Buxbaum, of Brooklyn; Bachrach, of Boston; Garo, of Boston; Witzel, of Los Angeles; Melvin Sykes, of Chicago, and others. The firm's interests were represented by a large force, including W. A. Rockwood, F. N. Leache and Frank Hearn.

California Card Mfg. Co., San Francisco. Desk, in charge of Wm. A. Leonard.

Central Dry-Plate Co., St. Louis. Desk, in charge of President F. Ernest Cramer and Mrs. Cramer.

A. M. Collins Mfg. Co., Philadelphia. Elaborate display of new varieties of artistic Fall-Mountings, including Bagdad, Bokara, Karnak and Sultana styles, the Veronica Folder being the best seller. In charge of H. K. Harriman, W. W. N. Righter, Joseph Kinn, R. A. Montgomery, Fred Lochman and S. C. Wright.

Cramer Dry-Plate Company, St. Louis. Usual handsome exhibit of specimen-prints by master-photographers, and 8 x 10 negatives and positives in illuminated cabinets, and displaying the famous Cramer qualities. All was enclosed in a red velvet proscenium, the photographs hanging against black velvet. President G. A. Cramer, J. W. Beattie and R. P. Brackett in charge.

Defender Photo-Supply Co., Rochester, N. Y. Desk, in charge of F. L. McNulty, of Boston Office.

The Eastman Kodak Company. Extensive exhibit of tastefully framed prints from famous portrait-studios, arranged against a green-velvet background. Gold-fringed, velvet hangings, potted ferns and palms completed the superb artistic effect. In personal charge of Harry M. Fell. Present were C. F. Ames, A. H. Paul, H. M. Fell, H. B. Wills, H. A. Collings, C. H. Leake, F. E. Penney, Walter Pierce, Charles Nelson and H. T. Rydell.

Hallderson Company, Chicago. Their Portable Triangle Flash-Lamp for Home-Portraiture was demonstrated at their booth and on the stage by T. E. Hallderson.

Haloid Company, Rochester, N. Y. Desk, with beautiful samples of their popular Cameo and Impera papers. In charge of F. W. Godfrey.

Hammer Dry-Plate Company, St. Louis. Desk, in charge of C. Shafer.

Ralph Harris & Co., of Boston. Dealers and importers of Wellington plates and papers, Euryplan lenses and general photo-supplies, including their popular specialty — the Rex Automatic Print, Film and Plate Washer. Desk, in charge of Ralph Harris, assisted by H. F. White.

A. J. Lloyd Company, Boston. General photo-supplies. Desk, in charge of Henry M. Seaver.

Pinkham & Smith Company, Boston. Photo-supplies and optical goods. Desk, with R. A. Cleveland, representative.

Presto-Mfg. Co., Pittsburgh, Pa. The Infallible Tinting-Mask. Desk, with samples, in charge of the indefatigable S. S. Loeb.

Robey-French Company, Boston. Exhibit of portrait-cameras, studio-furniture, rapid-printing machines and general accessories. In charge of Thomas Roberts, Jr., manager, assisted by W. M. Snell, F. Q. Avery, George A. McLaughlin, Wm. G. Homeyer, Carl J. Marion.

The Shoberg Company, Sioux City, Iowa. Portable Skylight, demonstrated by D. C. Shoberg, assisted by H. B. Gaines. A large exhibit of framed photographs gave proof of the excellences of their flashlight apparatus.

Taprell Loomis & Company, Chicago. Extensive display of high-class mountings and folders. In charge of J. C. Schulz and W. E. Sholl.

Wollensak Optical Company, Rochester, N. Y. Large wall-exhibit of remarkable photographs made with Verito, Velostigmat and other lenses of their construction. Represented by Mr. J. A. Dawes, assisted by Mrs. Dawes.

The Wollensak Trophy-Cup

This cup, a counterpart of one awarded by the Wollensak Optical Company, of Rochester, N. Y., last year, to W. A. Sands, of Brookline, went to Gregory H. Najarian, of Woonsocket, R. I. Other competitors were John Sabine, Providence; E. R. Trabold, Wallingford, Conn.; Will Rounds, Lowell; Mathews Studio, Roger Paul Jordan and Walter Penley, Portland, Me.

Certificates of Merit

Certificates of Merit were awarded to the following complimentary exhibitors: Pirie MacDonald, Higgason Studio, Pohle Studio, Jared Gardner, Mathews Studio, Peterson Studio, W. B. Poynter, R. D. Haley, Roger Paul Jordan, L. F. Bachrach and Gay Studio.

The Champlain Trophy-Cup

There were thirteen entries to compete for this handsome trophy offered by former president Orrin Champlain, one of Boston's most successful portrait-photographers. This sterling-silver cup, about twelve inches high and of beautiful design, was awarded to the Peterson Studio, of Hartford, Conn.

Complimentary Exhibits

Hallie Wilson, Berlin, N. H.; Hanson Studio, Portland, Me.; Pohle Studio, Buffalo; Phillips Studio, Philadelphia; W. B. Poynter, Cincinnati; Champlain Studio (a series of fine gum-prints); J. P. Haley and R. D. Haley, Bridgeport, Conn.; J. R. Neville, Brockton, Mass.; Pirie MacDonald, New York; Higgason Studio, Asheville, N. C.; John Sabine, Providence; Katherine Bingham, St. Johnsbury, Vermont (portraits, genres and landscapes); F. J. Carr, Taunton,

Mass.; W. R. Call, Manchester, N. H.; Schein Studio, Chelsea, Mass.; A. A. Nelson, Salem, Mass.; Kennedy Studio, Portland, Me.; Geo. H. Hastings, Newtonville, Mass.; Gregory H. Najarian, Woonsocket, R. I.; Gay Studio, Fall River, Mass.; E. R. Trabold, Wallingford, Conn.; Bartlett Sisters, Dorchester, Mass.; Jared Gardner, Rockland, Mass.; Peterson Studio, Hartford.

The New Executive Board

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Distinguished Visitors

Among the many shining lights in the American photographic firmament who graced the convention with their presence were Mary Camell, Pirie MacDonald, Elias Goldensky, Gustave Le Roy, Theodore Marceau, Frank R. Barrows, F. A. Rinehart, Ryland W. Phillips, Will H. Towles, Mrs. Geisler, Morris Burke Parkinson, George H. Hastings, "Pop" Rose, William Noetzel and Orrin Champlain.

The Banquet

Whatever disappointments may have lingered in the minds of susceptible participants in the two-days' events were quickly dissipated through the more intimate sociability of an animated dinner and the dance that followed. In the meantime the convention hall was thrown open to the citizens of Providence, who enjoyed the various pictorial exhibits. The dinner was enlivened by addresses, mostly of a humorous nature, by Col. Theodore Marceau, Ryland W. Phillips, Morris Burke Parkinson, Gregory H. Najarian, winner of the Wollensak trophy-cup, L. B. Painting, president-elect, F. Ernest Cramer, J. A. Dawes, who made a stirring plea for spiritual optimism. J. C. Abel and H. A. Collings introduced the speakers — and all was forgiven.

The Excursion

The excursion to Newport was made by boat and was enjoyed heartily by all. The long-promised shore-dinner proved novel and appetizing, even to the Rhode Islanders. Games of sport were followed by a survey of the famous Newport private residences, and the affair, from beginning to end, was declared a big success.

Lost and Found — Goldie's Watch

An inauspicious beginning of the convention was the arrival, early Tuesday morning, of Elias Goldensky, minus his gold watch — the one his wife gave him, many years ago. He had placed it under the pillow of his berth, in the Pullman car that left Philadelphia the night before. He telephoned immediately to the station-master at Boston, requesting that it be forwarded to him, care of the station-master at Providence. Goldie was optimistic; others were not. Wednesday noon, the master-photographer entered the hall, walked up to the Publisher of PHOTO-ERA and, smiling, displayed the priceless gift. It had been found by the colored porter and turned in. He, as well as the station-master, was

promptly and suitably rewarded by Mr. Goldensky, who had not lost faith in the honesty of man and the Pullman service.

The Photographic Press

The Photographic Press of America was represented by J. C. Abel, editor of *Abel's Weekly* and the *Amateur Photographers' Weekly*; *American Photography*, by F. R. Fraprie, F. R. P. S.; the *Bulletin of Photography* and the *Camera*, by Frank V. Chambers; PHOTO-ERA, by Wilfred A. French, Ph.D., and the *Photographic Journal of America*, by Thomas Coke Watkins.

L. B. Painting

THE New England Association is to be congratulated for having chosen, as its chief executive, L. B. Painting, of Concord, N. H. Mr. Painting is a portrait-photographer of first-rate ability, born of long experience in prominent studios in the East and of individual observation and study. About seven years ago, when



L. B. PAINTING, PRESIDENT-ELECT OF P. A. OF N. E.

Richard Kimball, son of the late W. G. C. Kimball, Concord's leading photographer, died, Mr. Painting was invited to take charge of the studio, which is now a corporation. Mr. Howard A. Kimball, brother of W. G. C. Kimball, is treasurer and business-manager, and Mr. Painting is vice-president and general manager as well as chief operator. Mr. Painting enjoys the confidence and respect of the people of Concord as artist, business-man and citizen. His little speech at the convention, in acknowledging his election to the office of president of the New England Association, evinced a superiority of intellect, an earnestness of purpose and

executive ability that stamp him as a forceful and capable leader such as the Association needs for its future success and influence. The best wishes of PHOTO-ERA are extended to him, and it is earnestly to be hoped that every photographer in New England will encourage and support him in his efforts to give the New England Association one of the best administrations in its history.

His Biggest Asset

WILL TOWLES remarked before the Providence Convention that his biggest asset was his wife. Others said the same about their wives, particularly the man who went to Providence alone. His wife remained at home doing her best to manage the household economically. One day, while her husband was at the convention, she heard that, on the first of November, two-cent letter-postage was to be increased to three cents. What did frugal wife do? Nothing less than run straight to the post-office and buy ten dollars' worth of two-cent stamps!

Justifiable Pride

A SERIES of pleasant incidents at the Providence Convention consisted in the perfectly excusable enthusiasm displayed by J. C. Abel, editor of *Abel's Weekly*, over the fact that his son, C. L. Abel, had enlisted in the service of Uncle Sam, and, after having spent several months in the officers' training-camp, at Fort Benjamin Harrison, he was commissioned First Lieutenant of Infantry in the United States Officers' Reserve. Eminently proud that his offspring is doing his bit in the defense of his country, Mr. Abel passed around the young man's photograph in khaki uniform and read extracts from interesting letters periodically received from him. Among the profoundly interested listeners were Editors Tennant, Watkins, Chambers, Fraprie, Ackerman and French, each of whom, not having a son to give to his country, envied Brother Abel. But hold! The last named of the list of editors has a son (his only child) in the United States Navy, where he is serving as ensign. He has said nothing of this until now — professional etiquette, perhaps — but is proud to have it known that he, too, has a son who is doing his bit as a patriot of his country.

Autochrome's Tenth Anniversary in the United States

ALTHOUGH the tenth anniversary of the invention of the Autochrome color-process occurred last year, it was not until 1907 that Autochrome plates were introduced into the United States. It would be pleasant if this event could be celebrated in some fitting way by our photographic societies. No doubt the thought will occur to some enterprising camera-club, whose members recognize the debt all photographers owe to the Lumières for realizing the dream of centuries to capture and fix the colors of nature. The time is at hand again to perpetuate, by means of Autochromes, the glorious autumnal coloring that glorifies American scenery in New England and elsewhere; and as the Autochrome method of color-photography has been relieved of its former technical difficulties, and is now simplicity itself, its devotees will add plates of new and beautiful effects to their collections. Inquiry shows that the supply of plates at the American agency, in New York, is ample to meet all reasonable demands. We have also been informed that should an Autochromist have on hand any out-dated plates he need not hesitate to expose them, as by using metol-hydroquinone in place of metoquinone they can be developed to look as well as fresh

ones. Autochrome plates over three years old have been developed, recently, that gave exceedingly good results. The formula and method of use are given in this month's Crucible Department.

The Autochrome factory, at Lyons, France, is under the management of Louis and Auguste Lumière. Louis Lumière devotes part of his time to the factory and the rest to hospital-work in the firm's own hospital. Auguste Lumière converted one of the large factory-buildings into a hospital, where he spends his entire time, being a noted doctor and surgeon himself. This hospital is supported entirely by the Lumières. It has now over one hundred and ten beds. Edouard Lumière, the youngest brother, was killed a short time ago at the front in France.

L'Amende Honorable

WHAT the Editor interpreted as a direct and unjustifiable slight to the American flag in a recent issue of an English cotemporary, and which he was quick to resent, seems to have been purely a criticism of its design from an artist's view-point, and not the result of any motive of malice or unfriendliness. As soon as the writer of the apparently flippant reference to our national emblem discovered that it had been received with disapproval in the States, he sent a complete and courteous explanation, signed in full, which reveals his generous impulses and innate gentlemanly instincts. He expresses himself as follows:

"Will you allow me to point out that the paragraph was part of an article in which various national flags, including the Union Jack, were criticized purely on the ground of artistic design? Not for a moment, of course, could I be guilty of the impertinence of criticizing your flag as a national symbol; indeed, in the remarks quoted I referred to it as a 'piece of drapery become alive and eloquent' and as 'the pulse-beat of America.' But as a careful student of American journals I can recall instances in which the design of the Stars and Stripes has been criticized even on your side of the water, and your cartoonists invariably represent Uncle Sam with striped trousers and starred vest, which by your own standard of taste is disrespectful. May I offer you, however, my sincere apologies, and assure you that my offence was wholly unintentional, and that no one is a more whole-hearted admirer of all that your flag stands for and has stood than

Your obedient servant,

Our Illustrations

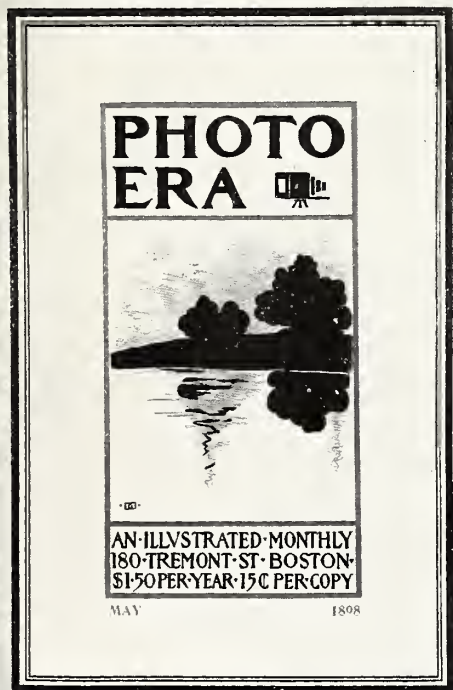
(Continued from page 265)

illumination, merit high praise. Data: 5 x 7 Seneca camera; 7-inch Wollensak; stop, F/4.5; June, about 11 A.M.; good light; $\frac{1}{5}$ second; Seed 30; pyro; print, contact Artura Iris E Smooth.

If there is a reader of PHOTO-ERA who fails to capitulate instantly to the charm of little Eve, as she placidly proceeds to her bath, let him make himself known and he will forever forfeit the Editor's favor! It was a happy snapshot and well worth the price of the investment — a miniature camera. The modeling of the little body is admirable, in view of the fact that the exposure, the technical one, was made in the open; and the perspective, though rather abrupt, serves to relieve the model against the surrounding landscape. Data: July, 3 P.M.; good light; F. P. Kodak 1 A, $2\frac{3}{4}$ x $4\frac{1}{4}$; R. R. lens; 5-inch focus; stop, F/16; no color-screen; $\frac{1}{25}$ second; Kodak film; M. Q. developer; print on Enlarging Cyko Studio; portion of film enlarged.

A Photo-Era Decennial

ALTHOUGH PHOTO-ERA MAGAZINE was born in 1898, it was in 1907 that the present publisher became proprietor, and, therefore, is in the happy position to receive congratulations on the tenth anniversary of his ownership of PHOTO-ERA. Previous to that time the magazine was issued for three years as a *de luxe* publication, the format being that of the present *Musician*,



THE FIRST NUMBER OF PHOTO-ERA

9 x 12 inches, and the material excellence all that lavish expenditure could produce. The consequence was such a divergence of expense and receipts that proved disastrous, and, during 1906, a reckless, wasteful corporation went through bankruptcy and was succeeded by a publisher of conservative tendencies. The shape of the magazine was reduced to its present dimensions and the retail-price of earlier years restored. The accompanying illustration is interesting as showing the external appearance of the initial number, published in May, 1898.

Of course, owing to the greatly augmented cost of materials — a substantial increase, no theory or an arbitrary increase — the Publisher has followed the lead of publishers of other strictly high-class magazines, and, last March, advanced this subscription-price from \$1.50 to \$2.00 — a step heartily approved, generally.

Increased Exports of Photo-Goods

In a recent report issued by the Bureau of Foreign and Domestic Commerce, Washington, D. C., the remarkable increase in the export of manufactured articles to foreign countries is shown clearly and accurately. With regard to photo-goods the report states that for the twelve months ending June, 1914, the value

of exports was \$9,431,890; for the same period ending June, 1917, the exports totaled \$14,321,578!

The Pittsburgh Salon

THE Fifth Annual Pittsburgh Salon of Photographic Art, Carnegie Institute, Department of Fine Arts, Pittsburgh, Pennsylvania, will be presented during the month of March, 1918. Last day for receiving prints, February 9, 1918.

The salient features of Pittsburgh Salon are: no expense to contributors except carriage to Pittsburgh, all work submitted will receive careful consideration by a Committee of Pictorial Photographers; only work not exhibited before in this country will be accepted; pictures to be sent mounted but unframed; all work accepted will be shown under glass.

The officers of the Pittsburgh Salon present these exhibitions for the advancement of pictorial photography, no mercenary motives prompting their work. It is guaranteed by contributing members who are the best artists in Pictorial Photography. New workers are especially invited to send work. Entry-blanks and other information on application, and final announcements will appear in all photographic journals later.

C. E. BEESON, *Secretary*.

700 Union Arcade Building, Pittsburgh, Pa.

Patriotism Tempered with Judgment

WHILE many banking-institutions are offering $4\frac{1}{2}\%$ interest on deposits in order to compete with the Government — which is offering Federal bonds at 4% — and in order to hold their deposits, they cannot guarantee, nor have they the license, to maintain a certain rate. It is very likely that they will pay an increased rate ($4\frac{1}{2}\%$) only for a short period and then suddenly drop to a $3\frac{1}{2}\%$ or a 4% basis, thus making it hardly worth while for depositors to make the change.

All Americans should support the Government and invest in Liberty Bonds, but rationally; for were they to withdraw all their savings from the banks and buy Government or other bonds, these acts would upset the banking-situation, which, in turn, would seriously affect business-interests. Even in displaying his patriotism, a person should exercise his judgment.

Short-Focus Portrait-Lenses

It is sometimes necessary to use as a studio a room which is really too short for the purpose, and in order to be able to take full-length portraits a very short-focus lens has then to be used. Unfortunately, in these small studios there is not too much capital available for apparatus, and the consequence is that the short-focus lens is used for all sizes, with disastrous results from the artistic point of view. Even with the cheapest class of work it is desirable to do it as well as possible, for without any art-education it is quite easy to say whether a photograph is a "good likeness" or not. For this reason, we advise everyone who has to work in such confined spaces to invest in a second lens of at least ten-inches focal length, so that cabinet-heads and even half-lengths can be made at a reasonable distance. As a general rule it may be taken that the space between lens and sitter should not be less than six feet. We are then in no danger of getting abnormally large hands and feet with sitting-poses, or noses and ears out of all proportion to each other with large heads. In these days of rapid plates F/8 lenses will answer all purposes with adults, and may be obtained second-hand at very small cost. It may be as well to remind the unskilled in lens-matters that the quality of a lens has nothing to do with the perspective it gives.

British Journal of Photography,



LONDON LETTER



THE Royal Photographic Society, as recorded in a recent letter, has given up holding its usual public exhibition this year. In its place, it is intended to have a show at the rooms of the Society, and entry-forms can now be obtained from the secretary, 35 Russell Square, London, W. C. The exhibition will be open from the 8th of October to the 24th of November. This is an interesting, and it seems to us, a courageous experiment on the part of the R. P. S., for naturally the public is not likely to look on a house-exhibition as equal in importance to one held in a public gallery, and we are not certain that the beloved objects of the workers of earlier years, namely medals, are to be given. But considered as a war-time economy, this new departure has a good deal to recommend it, and is quite in accord with the almost universal retrenchment which all good citizens are now practising. Besides, a photographic show, even if it is a small one, is very welcome in November, when London is always overfilled with people; and it is sure of a good attendance, as admittance is to be free. If it does nothing else, it will teach a good number of people the way to the Society's house, which is somewhat off the beaten track — in Russell Square.

The Imperial Dry-Plate Company has included in its present yearly handbook a very useful chart of nine negatives all of the same subject, printed on transparent paper, so that their relative qualities can easily be seen when the sheet is held up to the light. The first set of three show the result of underexposure with (a) brief development; (b) moderate development; (c) prolonged development. The second set gives correct exposure with (a) brief development; (b) correct development; (c) prolonged development; and the third set shows the results of overexposure in the same way as to development. There have no doubt been difficulties to get these paper-negatives well reproduced, and at any time but the present war-period they would have been better done. But in spite of this, they form an invaluable guide for the beginner who really wishes to master correct negative-making. He has only to look at pictures without troubling about a word of letterpress, to grasp the chief broad facts of negative-making. He can see at a glance the effects of over- or underexposure, both with short, medium, and prolonged development — in fact the whole matter is before him. And to the more experienced worker they are most interesting, for few could select such a comprehensive set, even from the mistakes of years. To some of us, who struggled as beginners in a quite unscientific manner in the early days of dryplate-photography, with the mysteries of negative-making, aided but little by the guide-books of the time, this chart would have been a veritable boon with its precise pictorial instructions. But it is just possible that it might have dashed some of the romance that clung around our early efforts, as we used to look upon plates as possessing almost a character and individuality that had to be humored and coaxed into what at the time seemed marvelous negatives. Now, all secrets are laid bare, and the beginner can gain a fair-working knowledge by just inspecting these nine clever little transparencies on tissue-paper. Each yearly hand-book of the Imperial Dry-Plate Company has some new and useful hints to do with negative-making, and we believe that this year's edition will be posted by the company to any one who writes for it.

A Collection of Photographs of eminent living persons was begun at the National Portrait Gallery some time ago. The idea was that it should form a useful

reference "picture-library" so to speak, where the reporter or biographer could study the features of his subject when writing him up. Of course, it would serve many other good purposes as well. This record is now to be extended, and a uniform series of permanent photographs will be got together representing naval, military, and civilian cotemporaries in responsible positions or who have rendered service to the country by their valor. We can't help thinking that if the war goes on much longer vast space will have to be allotted at the National Portrait Gallery for this purpose, if it is to be at all representative; for the difficulty would be to find the people who have not helped the country in some way or other! But, seriously, this seems a good opportunity for those in authority to see that only the best photography gets on the walls of the National Portrait Gallery; and by the best we mean those portraits that really give some suggestion of the sitter both in face and pose. Stereotyped positions and heavy retouching might make the collection "uniform," but it would not conduce to its value as a picture-library. It is to be feared that we English, taken in the lump, are still too photographically uneducated to bring pressure to bear on the authorities to see to it that only characteristic portraits are included.

Kodak Ltd. have been invited by the Camera Club to prepare an exhibition to be held in the Club's rooms (Adelphi) during October. It will be a bromide show, and the prints used in the Kodak bromide scheme, of which we have already given details, will be used to a certain extent, but much new material is being collected from other workers, and the show promises to be timely.

In the long-ago peace-days, this chronicle of things photographic was considerably easier than it is at the present time. In fact, the bother then was to weigh accurately and consider carefully which of our doings in London would have most interest for American readers. Now, one has to scrape laboriously the plate, so to speak, of photographic happenings; for, which ever way one looks, photography and photographers are getting mixed up with war-activities. If one goes to buy a camera, the talk in the shop is all about munitions-work; if one visits a local camera-club, as we did not long ago, one finds it has transformed itself into a society for giving entertainments, for wounded soldiers, and if we meet a photographer, we find that he has turned into something else, and so on. All this is really apropos of Ward Muir. By rights he should be able to furnish us with quite a lot of interesting photographic copy, for he is, or must we say, was, a well-known and active photographer. This excellent man of the camera is just now having some good notices in the press, but not for anything that can with honesty be regarded as a photographic subject. It is for a book called "Observations of an Orderly" and the author is given as "L.-Cpl." (Ward Muir). This in itself will give the reader a clue to his present activities. For the last two years he has been an orderly at the 3d. London General Hospital, and the book deals with his experiences there. It is like all his books, most readable; but it is useful as well, for it takes us inside a real war hospital, and we get through the trained mind of the author a very definite picture of the sad, the cheery, the humorous, and the tragic things that go on within its walls. The only grudge we have against him is that he leads us into a road that runs right away from photography, but the magazine devoted to the doings of his hospital often contains a reproduction or two of photographs that he has taken while on duty, and here, again, as in literature, we see how well the hospital orderly can reproduce the life in which he moves.

CARINE AND WILL CADBY.



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported expressly for the PHOTO-ERA MAGAZINE from the patent-law offices of Norman T. Whitaker, Washington, D. C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps.

Patent No. 1,241,200, on Film-Feeding Mechanism, has been granted to Henry Csanyi, of New York, N. Y., in which the following is claimed: A film-feeding mechanism, including co-acting elements, arranged adjacent the opposite side edges of the film, to grip the same by flexing portions thereof at predetermined times, and means to reciprocate said elements.

Patent No. 1,241,133, on Photographie Exposure-Meter, has been granted to John T. MacCurdy, of New York, N. Y., in which the following is claimed: A photographic time-exposure meter, comprising a photometric wedge, with its power to transmit light varied according to a logarithmic law, a relatively fixed scale of camera-stops, and a scale of exposure times adapted to be moved in harmony with the movement of the photometric wedge.

Frederic E. Ives, of Philadelphia, Pa., has been granted patent No. 1,240,344, on Photographic Film, in which the following is claimed: As a new photographic commodity of commerce a sensitized photographic colloid film carried upon a water-impervious support, and protectively sealed by a temporary water-impervious layer, which is in atmospheric contact with the sensitized film, and of a character capable of being readily and cleanly removed therefrom without injury to the colloid film.

Patent No. 1,240,335, on Photographic Film-Cartridge, has been granted to Harrison Gimdele, of Cincinnati, Ohio, in which the following is claimed: A film-cartridge embodying a covering-strip, a photographic film carried thereby, said covering-strip being slitted from a point near its outer edge toward its longitudinal center, and a film-engaging element independent of the film and covering-strip, and having means to be positioned loosely in the slit of the covering-strip and adapted to be secured to the film and covering-strip.

Patent No. 1,240,425, on Photographic Print-Washing, has been granted to Elmer Crusey, of Sidney, Ohio, in which the following is claimed: A photographic print-washer comprising a pan, provided with a vertical opening in the side thereof, an upstanding tube, provided with a vertical opening, rigidly secured to the outside of said pan and adjacent the opening in said pan, the above-mentioned openings being in register, an upstanding water-outlet means secured to the outside of said pan, the side of said pan adjacent the water-outlet means being provided with an opening which communicated with the upstanding water-outlet means, a bracket secured to the outside of the pan, and a basket rotatably mounted in the pan upon said bracket.

Using the Wire-Release

I HAVE just received my wire-release of twenty-two inches for my Premoette, and hereafter most of my snaps will be taken at the height of the eye, the height from which we see the scene that pleases us.

Holding the camera at the height of the eye, one can use the direct-view finder; but I find it just as well,

and in most cases better, to sight just over the top or along one corner of the camera.

WILLIAM H. BLACAR.

The Clarence H. White School of Photography

No lover of the artistic and beautiful can look at the porch and doorway of the Clarence H. White School of Photography, 122 East Seventeenth Street, New York City, without being convinced that the location



CLARENCE H. WHITE SCHOOL OF PHOTOGRAPHY

of this well-known school could not be improved. As a matter of fact, the building is the old Washington Irving house, which is noted for its beautiful architecture. Courses of instruction in all branches of photography are now being given. An interesting circular will be mailed to readers of PHOTO-ERA on request.



WITH THE TRADE



New Victor Flashlight-Catalog

THE approaching winter-months with their unfavorable light-conditions compel camerists to use various forms of artificial illumination to aid them in their work. With its customary timeliness and foresight, the Jas. H. Smith & Sons Co., Chicago, has issued an unusually attractive catalog, "Flashlight and other Photographic Specialties." Typographically well arranged and illustrated, its chief value lies in the detailed description of Victor and Inglis flash-powders, actino flash-cartridges and cartridge-holders, Victor and Halldorson flash-lamps, Victor studio flash-cabinet, intensifier, spotting-color, opaque, vignetter and other accessories. The manufacturers will mail this new catalog to anyone who will write for it and mention PHOTO-ERA.

A Book for Advanced Workers

THE second volume of the "Abridged Scientific Publications from the Research Laboratory of the Eastman Kodak Company" has been received. It contains valuable and trustworthy technical information of interest to scientists and advanced workers along special lines. The book is not intended for general distribution; but those qualified by occupation or education may obtain a copy free of charge.

Emergol Developer Makes Good

THREE years ago Emergol was produced by the Berlin Aniline Works, 213 Water Street, New York City, in the attempt to approach in excellence the well-known Agfa metol. After three years of every conceivable technical and practical test by the photographic trade in general, Emergol is offered as the nearest approach to Agfa metol in efficiency and all around serviceability. Though suitable formulæ are furnished, Emergol has been found to work to the best advantage when used in the same proportions as metol in any formula calling for metol. Further particulars will be given gladly by the manufacturers.

Bausch & Lomb To Enlarge Plant

ALTHOUGH, even in peace times, many government-contracts were given to the Bausch & Lomb Optical Company, Rochester, N. Y., the present war-time demands have taxed the output of the plant to the uttermost. As a result, a new five-story, fireproof, concrete building is to be built at once to meet this extra demand, and also to maintain the normal output of optical and photographic goods to the trade. It is evident that the United States Government shares with the photographic trade implicit confidence in the reliability, workmanship and efficiency of every article produced by this well-known firm.

New Quarters for David Stern Company

THE increasing demand for Davesco Service with regard to cameras, lenses and photo-supplies has resulted in the David Stern Company moving from 1047 West Madison Street to its own four-story Davesco Building at 1027-1029 West Madison Street, Chicago. Greatly increased floor-space will improve the service, we are

informed, and modern darkrooms on every floor, lens testing-room and other innovations in photographic merchandizing will result to the customer's advantage, for every camera and lens is to be tested carefully before being shipped. The company states that owing to a constantly moving stock of cameras, lenses, plates, paper and accessories mail orders will receive unusually prompt attention.

The Kroner Print-Dryer

THERE are few photographic processes that have not been improved and simplified. The drying of prints is no exception. The development of various types of print-dryers has been rapid, and among these the Kroner Print Dryer has established itself favorably among critical and practical professional and commercial photographers. Two sizes of machines are now manufactured by the Kroner Photo-Print Dryer Company, 323 Meramec Avenue, St. Louis, Mo., and detailed information may be obtained from the makers, who are the recipients of merited testimonials from prominent photographers.

Fraud, Then Collapse

OUR readers may remember that a remarkable amateur motion-picture camera was placed on the market last spring — remarkable in that its price was less than \$30, and its advertised efficiency equal to that of a \$2,000 professional machine! The makers had obtained ample capital, part of which was spent in an extensive and costly advertising-campaign; but because of serious mechanical defects, and outrageous misrepresentations by the manufacturers, the dealers declined to stock it and a usually gullible public refused to bite. As a consequence, the whole enterprise collapsed. The failure of the concern, as recently reported, involves a virtually total loss to the stockholders of about \$100,000, the only tangible assets being a lot of worthless cameras and some machinery.

A camera or any other photographic product not recognized and supported by the better class of photographic journals has a slim chance to succeed.

The "Ad"-Killer

THE man who stops his little ad
Is not so very wise, bedad!
Because his advertisements tell
The public what he has to sell.
And if his ad is not on deck,
The people pass him, up, by heck!
And none of them will hesitate
To trade with people up-to-date.

To stop your ad, we should remark,
Is just like winking in the dark —
You may know what it means, but gee!
Nobody else can ever see.
So do not for a moment think
That when you cut out printer's ink
You're saving money on the side;
'T is merely business-suicide.

— Exchange.



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Street-Scenes

WILLIAM S. DAVIS



BEGINNING with the earliest days of civilization, highways have played a most important part in the development of towns and nations. They have furnished the means of intercourse on land for commercial and social needs — not to mention warfare, when the location and condition of a road have been in numberless instances a deciding factor in the tide of battle, and thus not infrequently a factor in the fate of a nation. From the first rude paths and trails used with difficulty by lonely travelers on foot, the art of road-making has progressed greatly; but it seems doubtful whether the modern builder will succeed in constructing any of greater durability than those of the ancient Romans, some of which have survived the use of some twenty centuries. The most casual reading of history cannot fail to suggest something of the romantic interest associated with old highways over which has passed such a varied array of humanity — kingly pageants, marching armies in victory and defeat, the highway-robber on the watch for unwary travelers, and post-coaches drawn by four to six horses, accompanied by mounted out-riders on both sides, arriving at the wayside-inns with a great flourish of horns. Most of these, and many more, belong to the past; but other sights, undreamed of then, have taken their place, and there is enough in what we are wont to consider the prosaic present to give one any amount of pictorial material without looking far from home. Any kind of a street has something to offer, and it is, indeed, an open question whether there is any choice — aside from individual preference — between a busy city-street, a quiet country-lane or a wooded by-way.

Speaking broadly, the dominant features in city street-scenes are the architectural settings combined with the constant changes of grouping in the tide of traffic. In the villages and on open highways, one may reasonably expect to find more of nature herself — though not always un-

adorned. I regret to say, as in many localities what might be a charming prospect is ruined by hideous advertising-placards placed within point-blank range of the best standpoint. When such instances occur, the worker, if unable to overcome the annoyance, will have to pass on and look for a more favored spot; but let us hope not without registering a vow to condemn those that are responsible for such disfigurements of nature. Although living objects are a less dominating feature in the country-districts, those in search of "types" and picturesque groups of figures and livestock will be rewarded if due patience is exercised; but though a well-placed figure or team is helpful in many country road-scenes, a line must be drawn between this and genre-work — whether in city or country — as the latter is in a class by itself.

Changing atmospheric conditions play a part in the pictorial quality of this work, and often it is amazing how much can be done in one locality simply by taking advantage of variable sunshine and shadow-patterns, fog and mist, rainy-days — with their interesting reflected lights — snow-storms and night-effects. When trees are a feature, the seasons bring changes to them which are not to be overlooked; therefore, taking it all in all, street-scenes are by no means lacking in variety, and when rapidly shifting traffic must be considered while composing the picture, the skill and patience of the worker are taxed to a considerable degree. Indeed, one well-known photopictorialist — it is said — waited for three hours on a New York street one stormy winter-day for what he considered to be an ideal combination to present itself; but although patience is needed frequently this is rather an extreme case, and should not deter the average worker from having a try at similar material.

The point-of-view is highly important, including the height from which the subject is photographed. Were it not for the number of snapshots constantly made without due regard to the simplest rules, it would be unnecessary to tell any

one not to select the very middle of the road, from which each side recedes at the same angle to a vanishing-point in the center of the picture — producing a most mechanical looking composition. Add to this the employment of a lens embracing too wide an angle, and the camera held low in the hands, and one has the worst combination possible in a street-scene, as the violent foreshortening makes the roadway appear unnaturally wide, and simple objects in the foreground assume gigantic proportions as compared with the minute size of similar ones in the distance. Better “drawing” is obtained by using a lens whose focus is at least one and a half times the long way of the picture, though it comes to the same thing when one of relatively shorter focus is used if allowance is made for liberal trimming afterward — i.e., keeping the desired subject-matter within a limited area when the exposure is made; for the matter of pleasing perspective comes down to choosing a standpoint far enough from the foreground details to prevent violent foreshortening. Ordinary eye-level is generally the best height at which to hold the camera; as this is a natural point of vision on the street, figures and traffic appear more normal in relation to their surroundings, and the nearest portion of the roadbed included by the lens is at a greater distance than when the camera is placed lower. In city-streets a higher point-of-view is frequently good, such as that obtainable from the steps of some building or the top of a bus. Occasionally a low standpoint may be allowable to show some small detail better; but such exceptions only prove the rule. Another factor is the gradient in up- and down-hill roads. As I dealt with these effects in the June, 1916, issue of PHOTO-ERA, it is needless to repeat details in the space now available, though it may be stated that the relative amount of vertical space occupied by the road in



A GLIMPSE OF FIFTH AVENUE, NEW YORK

WILLIAM S. DAVIS

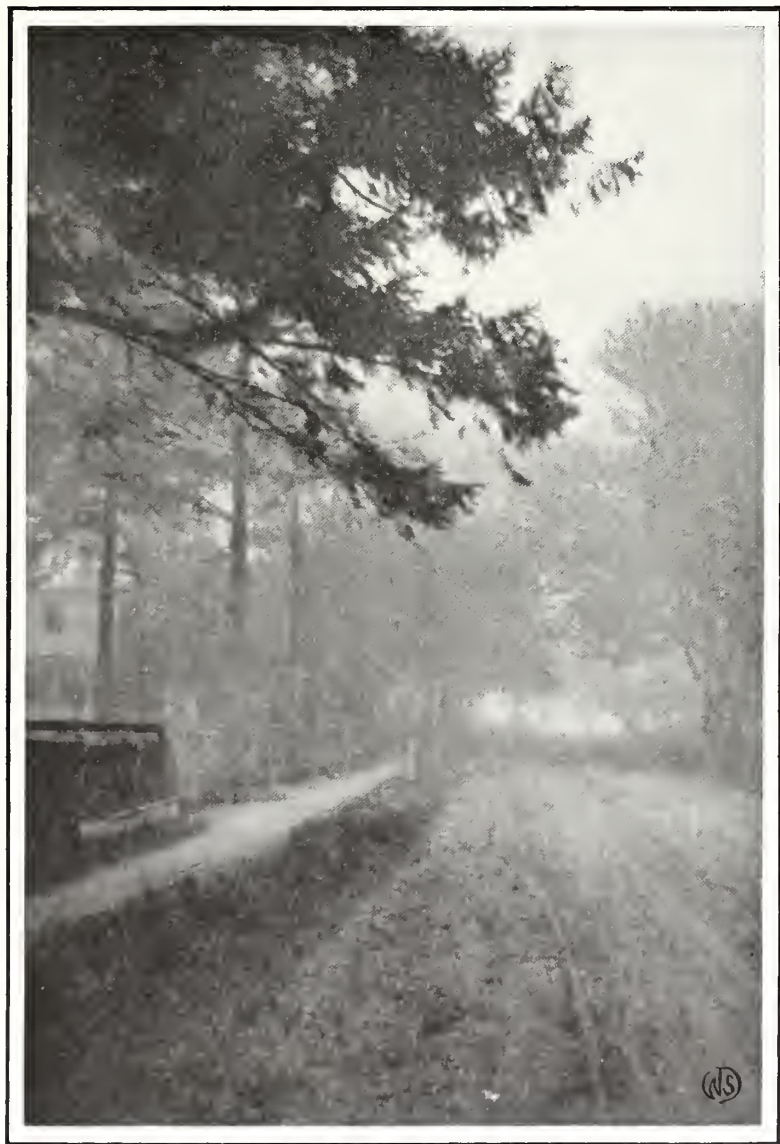
the composition has much to do with the impression — a high vanishing-point strongly suggesting rising ground, unless other parts counteract the effect. In depicting level streets, added dignity is given to tall buildings or trees when the horizon-line is kept comparatively low.

The character of the sky-line — i.e., the outlines of objects cutting against the sky — has much to do with making an effective picture. Note the monotonous effect produced by a solid row of buildings of uniform height, then study a group of varying height and broken roof-lines, with, perhaps, a graceful spire or tower as a leading feature, and the difference is at once apparent. The contours of trees along the country-road afford wide scope to work out effective patterns, especially against a background of good clouds. Side-lighting usually adds to the variety, not

only by casting shadows across a street, but from the fact that buildings on one side will be in sunshine and those on the opposite side will be more or less in shadow. For this reason, the morning- or afternoon-hours are usually the best time to work on bright days, though an exception must sometimes be made in a narrow street flanked by tall buildings which shut off so much light that it is difficult to get sufficient illumination of the shadows for shutter-exposures of moving objects.

Any sort of apparatus is suitable out on a country-highway where it is possible to work more leisurely; but in congested traffic an instrument of very moderate size which can be brought into use quickly and unobtrusively is really essential. Under such conditions the use of a tripod, even on the sidewalk, is generally out of the question, so that unless a reflex-type of camera is used — sometimes objectionable because of having to hold it low to look into the hood — one must rely upon the focusing-scale, and this, combined with the necessity of using a good-sized lens-aperture on many occasions, makes it essential to employ a rather short-focus lens to obtain sufficient depth at large opening. As I have already pointed out, the objection to including a wide-angle field is evident; but the only way to utilize the optical advantages of increased depth possessed by a short-focus lens is to use it upon a small camera. A practical outfit is a six-inch lens and $3\frac{1}{4} \times 4\frac{1}{4}$ camera of any desired pattern. Such a lens can be worked at an aperture of at least $F/6.3$, and a pleasing quality

of definition obtained on all parts of the negative of objects about twenty feet outward when the pointer is set at between the twenty-five and fifty foot mark on the scale. The slight softness in the extreme distance so produced is pictorially helpful. The lenses of three- to four-inch focus fitted to the higher grade pocket-instruments may be used at still larger apertures with little or no focusing, making such equipments especially well adapted to work under difficult conditions. One accessory not to be overlooked is a direct-vision finder, not only because one is thus enabled to use



A FOGGY VISTA

WILLIAM S. DAVIS

the camera at eye-level, but because it is possible to watch what is going on outside the field-of-view, so that the formation of attractive groupings may be seen in time, or an unexpected introduction of some near-by figure right in front of the lens at the critical moment may be avoided.

With regard to exposures, these must be determined largely by the nearness, speed and direction of moving traffic; the adjustment of timing to condition of light being regulated as far as circumstances allow by size of stop, etc. Naturally, figures or vehicles approaching or receding in line with the observer show least the effect of motion, and when traffic is shown in perspective it is possible to give $\frac{1}{25}$ of a second if objects are not nearer than about fifty feet from the lens — assuming, of course, that the speed is that of normal city-traffic. When figures or cars in quick motion are included at closer range, a much faster exposure is necessary to guard against blurring the image — likewise, whenever they move across the line of vision. It is best to try to avoid including figures on a very large scale, as they are apt to attract undue attention in the picture, look self-conscious or display stiff positions; and too much traffic moving across the street catches the eye and usually prevents one from following the



A WET MORNING

WILLIAM S. DAVIS



A GLIMPSE OF FULTON STREET

WILLIAM S. DAVIS

natural lines of perspective in composition. I know the element of chance enters into all studies of this class, since the photographer, after selecting a standpoint, can only wait for a favorable combination to occur; but with care it is possible to avoid such things as a uniform and scattered spacing of objects, a horse half in and half out of the picture, or a near-by figure about to step out of the composition. Many a picturesque bit can be obtained from an omnibus, as this gives one a point-of-view amidst the traffic not obtainable when one is afoot, and the element of uncertainty, and quickness with which selections must be made, add to the interest. A front-seat on top is the best, unless one wishes to catch the traffic following, when a rear-seat would naturally be chosen. By avoiding the rush-hours, or waiting for a partly filled omnibus to come along, one can select his seat without difficulty. The camera should be kept in readiness for instant use, and the shutter set at a good speed, for what with jolting on the road and vibration from the engine some failures are likely to occur even with the fastest speed available from an ordinary inter-lens shutter. My best results were obtained with the



WHEN THE SNOW LIES DEEP

WILLIAM S. DAVIS

shutter set at the $\frac{1}{100}$ mark, and exposures made while the "bus" stopped an instant for passengers, or was held by the traffic-officer. One point to be observed on a "motor-bus" is never to rest the camera upon any part, as this brings it into contact with the vibration from the engine. The best plan is to hold the instrument in the hands, and well clear of one's body.

Among the special "effects" of pictorial value, mention must be made of reflections upon wet pavements or in roadside-puddles, which often break up a flat expanse of even-tone into pleasing gradations of shimmering lights and half-tones. Little need be said with regard to technical treatment, unless it be to suggest the use of a non-halation plate, when plates are employed. Owing to the amount of reflected light present, exposures, even on gray days, can be about the same as in clear weather. Much the same treatment applies to snow-storm effects; but care must be taken to keep the lens dry — a cardboard lens-hood accomplishing the result effectively. To show the quality of falling snow-flakes, a fairly

dark background is needed, such as a row of buildings. Fog and mist, as well as snow, are a great aid to emphasize aerial perspective, and under these conditions some near-by feature may be brought out in a telling manner against the simplified tones of more distant parts.

A separate article would be needed to cover the details connected with artificial-light effects, but the more important points can be mentioned. Twilight is often a good time to work, since this is a slack time on many streets; and when the lights are first turned on there is still enough diffused daylight left to render a short time-exposure possible without missing needful detail in the architectural masses. With fast plates or films, and a fairly large lens-opening, excellent results may thus be obtained by exposures ranging from five to thirty seconds. Of course, moving figures or vehicles close by must be avoided; but a group of pedestrians approaching, or moving away from, the camera half a block distant can be disregarded. In composing night-scenes, special care should be given to the selection of ma-

terial which forms an interesting pattern seen *en masse* against the sky, or some other plain background, as the strength of a nocturnal composition depends mainly upon this. The location of the more prominent artificial lights against these dark masses is literally a "catch-light"—to use a professional photographer's term—since the eye is drawn immediately to them. On this account, one should try to locate these lights so as to lead the eye into the composition. Technically, the main difficulty is to render bright lights in a satisfactory manner. Some diffusion is not objectionable from an artistic standpoint—it being more in keeping with our visual impression than a perfectly sharp image would be; but this is different from the disagreeable circles and secondary images sometimes obtained. Films, or double-coated plates, will take care of the effect when the lights are a moderate distance from the lens; but it is almost or quite impossible to prevent the appearance of unnatural results in the case of open arc-lights at close range, consequently, if these cannot be wholly avoided, or it seems desirable to utilize the illumination of an arc-light in the foreground, the only safe thing is to try to interpose some opaque body in a direct line between it and the lens, such as the trunk of a tree, or a bit of projecting architectural detail. Exposures after nightfall run from about five to thirty *minutes*, according to the amount of illumination available, snow or wet pavements being helpful in this respect. Figures in motion will leave no impression in the negative because of the long exposures needed; but when lighted cars, or vehicles of any sort, are seen to approach, the lens should be covered with a piece of card until they have passed out of range, due allowance being made for the time the lens remained covered. In all street snapshots where a swing-back and rising-front cannot be made use of there is likely to be some distortion or tilting of vertical lines in the negatives, especially when the camera has been tipped much to include all of a fairly tall building. However, this can be remedied, when printing with a focusing-enlarger, if either the easel or negative is tilted to the same extent that a swing-back should have been, had such been used when the negative was made. This point is a very useful and valuable one to know, as many times it is impossible to avoid tilting the camera. However, care should be taken to try to make the picture technically perfect.



FIFTH AVENUE FROM A MOTOR-BUS WILLIAM S. DAVIS

Drawing in Photography

DRAWING is the manner of representing objects on a flat surface by means of pencil, pen or crayon—including the graphic arts—referring to the quality of the representation. Obviously, this applies to photography; and the representation or drawing is faulty when limbs appear distorted, when perspective is unnatural, when the character of objects is in doubt, and detail lacks form and identity. Such is bad drawing in photography.

Drawing in photography, by its very nature, should represent absolute perfection in line and detail; and yet the practitioner, through ignorance, carelessness or the use of inadequate tools (lenses), can misrepresent the truthful appearance of an object or scene. Examples of faulty drawing may be observed frequently in portraiture—due to the employment of the wrong lens or one of insufficient focal length, to unskilful lighting, or even to the imperfect contact of negative and printing-medium. Too little attention has been paid to the background—in home-portraiture and outdoor scenes—which often shows an utter disregard for truth of detail. This is due to the use of too large a stop, sacrificing depth of focus, or to careless focusing.—W. A. F.



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Unit-Photography

F. M. STEADMAN



HEN used in its pure form, Unit-Photography is really not an exposure-method at all, but a physically correct unification of actinic brightness or actinic and of lens-stops (solid angle) which enables exposure to be computed from cause-and-effect reasoning. Pure Unit-Photography eliminates the whole idea of especial or *arbitrary* exposure-methods by es-

half of 8, or 4 seconds' careful time-exposure.

Stop-values: If under otherwise fixed conditions a certain stop requires 16 seconds' exposure, the stop having *double* the working-value of the former will require *one-half* of 16 seconds, or 8 seconds.

Speed of plates and films: If under otherwise fixed conditions a certain plate requires, for example, 32 seconds' exposure, a plate having *double*



THE EVENING-PAPER

F. M. STEADMAN

One-eighth the distance from the lamp to the head, a white card measured with the Aabameter 8 actinos. At the head, $\frac{1}{8}$ of 8, or $\frac{1}{8}$ actino. Unit-stop 128 (F/5.6 or U. 8; 2) was used, which requires 2 seconds to take a unit brightness subject. (See key to exposures) Eight times 2 seconds, or 16 seconds, was given as the exposure

tablishing the same simple basis of reasoning that is employed in the many simple problems that we encounter daily in our work.

The three main elements of exposure are — the actinic brightness of the subject, the working-value of the stop used and the speed of the plate or film used. That these elements are adaptable to such simple cause-and-effect reasoning will be seen from the following:

Actinic brightness of subject: If under otherwise fixed conditions a subject of a certain brightness — let us say a brightness of *one* — requires 8 seconds' exposure, a subject having a brightness of *two*, or twice as bright, would require one-

the speed of the former will require *one-half* of 32 seconds, or 16 seconds.

If there had been established on the basic truth of light-convergence a correct unit of actinism when photography was discovered, *there would not have been any exposure difficulties or problem, nor the resulting chaos of photographic practice, as we see it to-day.* Instead of "cloudy bright," and all such inexact terms, Unit-Photography supplies a true unit for measuring and stating intelligently degrees of brightness, and, instead of "stop-numbers," it introduces a true numbering of "stop-values."

The Aabameter or Unit-Actinometer measures

the actinic brightness of objects and subjects. The name of the unit is the "Actino." This meter will be described further on.

How exposures are computed in simple numbers, and on the basis of simple cause-and-effect reasoning, will be made clear by the table on page 278, in the second column of which the unit-stop numbering is seen. The one essential property of stops is their *working-value*, and the *unit-numbering* is the statement of that value — taking as number one, or the unit-stop, the stop having the form of $F/64$. In this manner, if the unit-stop requires 16 seconds' exposure, the 4



FIGURE 1

Opal shade at X measured with Aabameter 2 actinos. A white card at top of water-bottle measured 8 actinos. The deep red clay-bottle was judged as having $\frac{1}{8}$ of 8, or 1 actino, where full light shone upon it. Articles below were lighter color but farther away, and all lower part was judged as coming within the contrast range of the film, since the exposure to the highlight area is a full normal one and "gets" lower values to the extent of its range. Stop 16 was used and, based on the value of the shade at X , $\frac{1}{2}$ of 16 seconds, or 8 seconds, was given.



FIGURE 2

An image of the wires cast with a lens working at 128 units ($F/5.6$ or $U. S. 2$) made a least visible tint on the Aabameter paper in 16 seconds. At $F/1$, the real opening in the meter, this same intensity would create the same tint in $\frac{1}{32}$ of 16 seconds, or $\frac{1}{2}$ second. This is equal to $\frac{1}{128}$ of a minute, and the brightness of the wires is therefore 128 actinos. In the key to exposures, note that unit-stop 2 requires 128 seconds to take a unit brightness subject. To expose normally the wire, $\frac{1}{128}$ of 128 seconds, or 1 second, was given.

Below: At X , $\frac{1}{2}$ the distance from the bulb to the subject, a white card measured 4 actinos, and therefore at the subject $\frac{1}{4}$ of 4, or $\frac{1}{16}$ of an actino. This is correct, as the napkin and table-cloth were white. As soon as the flame was exposed the stop was opened to X unit-stop 32 ($F/11$), which requires 8 seconds to take a unit brightness subject. Sixteen times that exposure, or 2 minutes, was given. (The exposure to the bulb was stopped by holding a black cloth between it and the lens.)

unit-stop will require one-fourth of that time, or 4 seconds, just as a labor-problem is computed when more than one man is employed, and when it is known in advance the time that it will take one man to do the work. The following table will be of assistance to show the relation of actinos, lens-stops and unit speed-exposures.

Brightness of subjects in "Actinos," as found with Aabameter.	Working-values of lens-stops. (The unit-numbering for stops.)	The unit speed-exposure for plates and films of different speeds. Seconds required to take normally a one actino brightness subject with unit stop.
1 actino	No. 1	64, 128, 256, 512,
2 actinos	No. 2	1,024, 2,048.
4 "	No. 4	
8 "	No. 8	
16 "	No. 16	
32 "	No. 32	
64 "	No. 64	
etc.	etc.	

To make a normal exposure with the unit-stop on a subject having unit brightness in its highlight area, and having virtually normal contrast (the conditions of the top-line in the table), the fastest plates of the Sigma class require but 64 seconds. Speed and Speedex film, and class $\frac{1}{2}$ in PHOTO-ERA Exposure-Guide, 128 seconds, and the longer exposures for slower plates and films as per the Unit-Photography Speed-List, which, as will be noted, is refined only to differences of one hundred percent, accurate enough in practice when all the other essential factors are dominated carefully.

Problems in exposure: If a subject proves on measurement to have 16 actinos of brightness, what exposure will it require with the unit-stop and the Sigma plate to photograph it? If the Sigma plate requires 64 seconds to take a one actino subject with stop 1, a 16 actino brightness subject will require $\frac{1}{16}$ of 64, or 4 seconds' exposure. And with the 8 unit-stop $\frac{1}{8}$ of 4 seconds, or $\frac{1}{2}$ second.

With the same plate, what will be the exposure when taking a 512 actino subject with stop $1\frac{1}{2}$ of 64 seconds, or $\frac{1}{8}$ of a second. What stop should be used to enable an exposure of $\frac{1}{1024}$ second to be given, as for speed work? Here we simply divide the exposure with the unit-stop by the exposure that it is necessary to give, and the result will be the unit value of the stop which must be used: $\frac{1}{8} \div \frac{1}{1024} = 128$, the unit value of the stop to use (F/5.6).

Take now the Speedex film, which has a unit-exposure of 128 seconds. The brightest cheek of a portrait-subject measures with the Aabameter, let us say, 8 actinos — the exposure with the unit-stop then will be reduced $\frac{1}{8}$ of 128 seconds, or 16 seconds; and if it is desired to make a quarter-second exposure (as with a small child, for example, to avoid moving), then 16 divided by $\frac{1}{4}$ equals 64, the unit-value of the stop to use. Or dividing 16 seconds, the exposure with the unit-stop, by the value of any stop, will find the exposure for that stop.

Algebraically, the relation is simply expressed by the equation $T = \frac{T_u}{a}$, in which T is the time of



INTO THE GARDEN

F. M. STEADMAN

Light entered Aabameter openings from area near X. One sixty-fourth of a minute (1 second) was given, and 3 tints became visible, giving 256 actinos as the intensity of the highlight area (64, 128, 256 is the reading). Since a one actino brightness subject requires, with the film that I am using, 128 seconds with stop 2, unit numbering (F/45 or U. S. 128), a 256 actino subject will require $\frac{1}{256}$ of 128 seconds, or $\frac{1}{2}$ second, which was given. (See key to exposures.)

exposure in any case, T the speed-time of the plate used, a the aperture in unit-cone value and I the actinic force of the light source in actinos.

A table on page 32 of "Unit-Photography" gives the solid-angle value, the Uniform System or (U. S.) number and the sphere value of all cones from F/1 to F/64. The smaller solid-angle values constitute the unit-stop scale, which may well be placed on any lens for the reason that the solid angle or working-value of a stop is the one fundamental truth that it is necessary to know when using it, as has been stated before.

This reduction of exposure-computations to a simple reasoning basis lays it, mentally, to one

side as a thing already mastered and to be used afterwards in a matter-of-fact way, the vital interest in exposure passing to the truly interesting and instructive work of understanding and measuring the actinic brightness of surfaces and subjects to be photographed.

The new basic idea in Unit-Photography is that solid-angle dimension is taken to be fundamental in *all* problems of light-intensity, whether with flames, ordinary areas, openings or lens-stops. If a flame having an average diameter of one inch illuminates a surface one inch from it, the form of the converging beam of light that comes

from the area of the flame to illuminate *each point* of that surface is practically that of a cone whose altitude is one. This form is the same as has been thought of in lens-stops as F/1. The F-numbers are used in Unit-Photography to denote the *form* of light-cones, regardless of whether made by lens-stops or in natural illumination. The basic truth of solid angle is the same in character always, and as the F-numbers simply denote the *form* of light-cones they should be employed universally for that purpose.

In the above sense the largest opening in the Aabameter or Unit-Actinometer has a solid-angle form of F/1, and a solid-angle *value* of 4,096 units, since the unit is $F \times 64$.

The revolutionary character of Unit-Photography can be best realized when it is understood that the Aabameter, as a physical measuring-apparatus for determining the actinic force of surfaces and expanses, *eliminates the dimensions of area and distance as fundamental elements in the computation of brightness-problems.*

Alterations of area, as by raising a window-curtain higher, by using a larger stop in a lens and by increasing the number of lights in a group, alter the intrinsic brightness on a surface illuminated *only when such alteration changes the solid-angle dimension of the light which converges from the source to a point on that surface.* For example: No change in exposure is required when a lens-stop is opened just enough to recompense the greater distance from the plate when photographing a close object, as when using a stop two numbers larger (having four times the area) when copying an object at full size. The same F/ form of stop in lenses of shorter and longer focus requires the same exposure. So long as, by any means, the F/ form of a stop is kept constant, no variation of distance from the lens to the subject affects the time of exposure — except for reasons foreign to the discussion, as of intervening atmosphere, etc. The above supplies the basic reason for truths that are already well known.

As to openings, a head two feet from a window (two feet wide) will be of the same intensity as at four feet from one four feet wide. (It is true that the larger window would illuminate well a group; but this is another problem, foreign to that of intrinsic intensity or brightness, which is being discussed.)

For hundreds of years, the only idea of intensity that has been given to students in the schools is that incorporated in the law of inverse squares as referring to light radiating from a *point-source*, which is a condition of illumination impossible in nature, for no *truly* point-source can exist, nor could visibility result from the light radiating even from an extremely small



DROPPING-PETALS

F. M. STEADMAN

White card at $\frac{1}{2}$ the distance from lamp to X measured 16 actinos. At X, $\frac{1}{16}$ of 16, or 1 actino, by computation with law of inverse squares, and the deep red and green leaves, $\frac{1}{8}$ of one, or $\frac{1}{8}$ actino. Unit-stop 32 (F/11 or U. S. 8) was used, which requires 8 seconds to take a one actino brightness subject. $8 \div \frac{1}{8}$ (or 8 times 8) equals 64 seconds, which was given. By simple analysis: "If a subject of unit brightness requires with a certain stop 8 seconds' exposure a subject of but $\frac{1}{8}$ unit brightness will require 8 times 8, or 64 seconds."

practical point. Besides this, it is evident confusion to use as the basic truth of intensity a definite surface-area at different distances from a light-source, since *area is not an element in the problem of intrinsic intensity*, but only in that of accounting for the total illumination from the source. In either position, the area of the lighted surface could be varied in any reasonable degree without altering the *intrinsic brightness* of the surface. The real truths involved in the conditions as illustrated in the school-books (that of a small flame lighting a surface at different distances) are left unexplained, and it is no wonder that the popular mind, to-day, is completely in ignorance of the truths and of the use of light as in photography. Unit-Photography is to combat this error and to rectify this chaotic condition.

The Aabameter or Unit-Actinometer measures light converging from an area or expanse through its openings upon a standard tinting-paper. Observing the one simple condition, that the surface is near enough to the Aabameter to fill the F/1 angle of its largest opening (that is, with the instrument a little closer to that area than the narrowest width of the area), any uniformly intense surface will disclose its intrinsic actinism *by the single factor* of the time that is required to produce on the standard paper in the meter a standard or "least visible" tint.

The Aabameter tint time,	Actinism
or "ATT" of —	in Actinos

Maximum summer sky	$\frac{1}{8}$ second . . .	512 Act.
Sky at sunset (ordinarily) . . .	2 seconds . . .	32 "
A face in bright shade 2, 4 or 8 seconds . . .		32, 16 or 8 "

(The Aabameter discloses which value is right in each case.)

Since the unit of actinism has been chosen as a surface whose tinting-time at H is *one minute* (64 seconds), the tinting-time, expressed in the fraction of a minute (as $\frac{1}{8}$ second equals $\frac{1}{512}$ of a minute, 2 seconds $\frac{1}{32}$ minute, 4 seconds $\frac{1}{16}$ minute, etc.), will have an actinic force in actinos *equal to the denominator of the fraction*. For example, $\frac{1}{2}$ minute tinting-time denotes a surface of 2 actinos, $\frac{1}{4}$ minute 4 actinos, $\frac{1}{8}$ minute 8 actinos, etc. Mathematically, the brightness in actinos is the unit-tint time divided by the tinting-time as found, whether both are expressed in seconds or minutes.

Since the unit speed-exposure for any plate or film, as 128 seconds for Speed and Speedex films, can be expressed also *in advance* for all the other stops in any lens (by dividing that time in half for each succeeding larger stop), it is seen that any stop-scale can be used on the lens provided one does not care to make the change to the unit-numbering. When the speed-exposure is expressed on a card for each of the stops in any

lens, the user has but to select the stop that he wishes to use, and to divide *the* speed-exposure for that stop (for the film or plate used) by the brightness of the subject in actinos, to find the exposure for that stop.

The Aabameter can also be used in the ordinary sense as an actinometer, without the unit-measurement of brightness, by finding the exposure time directly from the tinting-time with the meter. In this regard an analysis of the physical conditions will be of interest. Take, for example, the Speed film — it is a simple fact, easy to verify by experiment, that it takes 2,048 times as long to get a *least visible tint* on the film as it does to give the same emulsion a correct or *normal camera-exposure*; and since the tinting is *visible* it could be made in advance and would be a practical guide for the camera exposure were it not for the length of time required to make the tint. But let us suppose a specific case, one in which a certain subject can be taken normally with stop 16 in the camera in one second. Now, with the same stop it would take 2,048 seconds to obtain a least visible tint on the film (looking for the tint at that point on the emulsion where the image of the highlight-area of the subject impinged upon it). But all lenses work faster than stop 16, and this tinting-time could therefore be reduced considerably, depending on the working-value of the lens at its largest opening. Should the lens be as rapid as F/4, the tinting-time could be reduced to $\frac{1}{16}$ of 2,048 seconds, or 128 seconds (since F/4 is 16 times faster-working than F/16).

But 128 seconds is still too long a time to spend taking a tint as a guide to exposure. Suppose, however, that this tint could be made at F/1, a converging beam of light 16 times greater in solid angle than F/4? The tinting-time then could be reduced to $\frac{1}{16}$ of 128 seconds, or 8 seconds, *only eight times longer than the actual camera-exposure with stop 16*. And who in practice would not be willing to spend 8 seconds in getting a visible tint at F/1, *letting the actual highlight-area of the subject make the tint*, when in so doing he could know positively that $\frac{1}{8}$ of that time (in this case one second) is the actual exposure with the lens in taking the picture?

Now this F/1 opening or solid angle is precisely what the Aabameter furnishes. This value is 256 times greater than F/16 in a lens, and this is what reduces the tint-time to a practical duration. The accuracy is due to the fact that the very same light that takes the picture (that from the highlight-area of the subject itself) *also makes* the tint — not on the film emulsion, however, but on the tinting-medium used in the meter, and which has been selected as a standard tinting-medium on account of its rapid tinting.

For the fastest plates the exposure for stop 16 is $\frac{1}{16}$ of the ATT instead of $\frac{1}{8}$, as for the new fast films; and for slower plates it is $\frac{1}{4}$, $\frac{1}{2}$ and the whole ATT, according to the speed list in the "Tinting-Time Method" for using the meter.

Many photographers are already accustomed to using a method in which there is a "speed-stop" which requires the actual tinting-time of the meter as the exposure, this speed-stop being smaller for faster plates and larger for slower ones. The Aabameter also lends itself perfectly to this method, since it is evident that with a certain plate, if the meter tinting-time is 2,048 times longer than the exposure-time (with the same stop), the tinting-time, taken with F/1, will be the actual exposure with F/45, the stop that has $\frac{1}{2048}$ the working-value of F/1. In this way the chemically slower tinting-time is made equal to the camera-exposure in point of time.

In the "Tinting-Time Method" speed-lists, those plates having

the factor	$\frac{1}{16}$	have as the speed stop	F/64
" "	$\frac{1}{8}$	" " " "	F/45
" "	$\frac{1}{4}$	" " " "	F/32
" "	$\frac{1}{2}$	" " " "	F/22
" "	1	" " " "	F/16
" "	2	" " " "	F/11, etc.

(The use of the exact time interval, 2,048 seconds, in this article is due to the rule in "Unit-Photography" of taking into account only value-differences of one hundred percent, according to the geometric scale by two, as 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1,024, 2,056, etc.)

Key to the exposures: The film used requires for the Unit-Stop number one, 256 seconds, to take normally a one actino brightness subject; stop number two, 128 seconds, etc., as will be seen by the third and fourth lines, which are the unit-numbers or rather *values* of the different stops and the unit-brightness subject-exposure for each stop. The equivalent F and Uniform numbers are given in the first and second line.

Seconds required to take a unit brightness subject:

U. S.	1	F/64	F/45	F/32	F/22	F/16	F/11	F/8	F/5.6	F/4
F	64	45	32	22	16	11	8	5.6	4	
U. S.	256	128	64	32	16	8	4	2	1	
Unit	1	2	4	8	16	32	64	128	256	
Unit Ex.	256	128	64	32	16	8	4	2	1	

With a certain speed of emulsion it happens that the unit-exposures coincide with the U. S. stop-numbers. Should the plate be twice the speed, however, the unit-exposure for each stop would of course be exactly one-half of that shown in the fourth line; if only half as fast, double, etc.

Burson & Condit Work for Amateurs

MICHAEL GROSS

THE last order in the house had been finished Monday afternoon and delivered on Tuesday. It was now Friday, and not another piece of work had yet come in. Art, rearranging the bottles and plate-boxes on the shelves for about the one-hundredth time in the last three days, gave vent to his feelings by whistling a lugubrious lament. Suddenly the door opened and Burson came in.

"Any luck?" Art asked eagerly; then, reading his answer by the worried look in Burson's eyes, he turned to the shelves again and went on with his work. Burson walked to the nearest chair and slumped into it heavily.

"Business is surely mighty slow for the month of December," he finally said. "Can it be, I wonder, that all the buyers I've seen to-day are saving up their money to invest in Christmas presents. They're holding on to it so tight it would take a crowbar to unloosen a five-dollar order."

The statement being too obvious to need comment, Art kept silent, while Burson, having had

his "say," picked up a magazine and commenced idly turning the leaves. A moment later he looked up from the page before him. "I notice that the Eastman Kodak Company always finds a way to keep busy," he remarked to Art. "In the summer their advertisements tell the artful amateur to be sure to carry a camera on his vacation, and in the winter they play up the delights of making snow-pictures."

Art kept silent for so long that Burson thought he had not been heard. "There's an idea in that last remark of yours, Burson," he said finally, "that ought to bring us some business. If the Eastman Company is spending thousands of dollars in magazine-advertising to push winter-photography, we ought to cash in on that expenditure." Burson failed to see the connection, and said so.

"Well, here's the way I figure it out," Art explained. "Those advertisements will stimulate winter-photography, but it will be mostly among people living in the country. Now, these suburbanites, although all rapid snapshot-fans, rarely do their own developing and printing. They

press the button and let the corner druggist do the rest."

"Yes, but where do we come in?" Burson asked impatiently.

"We're coming in right now," Art assured him. "If these amateurs are making winter-snapshots, there is no corner-druggist, at this time of the year, who will develop their films, for these men take in photo-work in the summer-time only, when the quantity makes it profitable. If we insert a little announcement in several of the suburban papers, soliciting orders for amateur photo-finishing, I believe that the results would be surprising."

Burson thought the matter over for a few minutes. "It is n't bad," was his final decision, "and the space in those country-papers is so cheap that it will take only a few orders to make the investment a paying one."

The following Sunday four near-by suburban newspapers carried the Burson & Condit advertisement soliciting orders for photo-finishing. Monday morning, the first six-exposure spool of film to be developed and printed had come in.

"We are surely getting quick results," Art said, at sight of the package. "This fellow must have actually been waiting for some one to come along and offer to develop and print his stuff for him."

Having nothing else to do, the boys went into the darkroom together, to run through the spool. However, no sooner had Art placed the film in the developer than three of the snapshots flashed up and then turned black. The other three, on the contrary, were evidently underexposed. Determined to turn out the best job possible on their first order, the boys used their combined skill in an effort to save at least these three. They carried development as far as they dared, and then, afterwards, intensified the film. The three exposures that had flashed up proved, on being taken out of the hypo, to be a confused blur, as though, on each film, one picture had been made on top of another. A glance convinced the boys that nothing could be done with these, and Burson threw them away. When the three passable films were dry, Burson made a print from each, using a special paper, advertised to give the best results from underexposed negatives.

"We're spending about five dollars' worth of time and forty cents' worth of paper on this order," Art said, "but we've got to make our first customers our boosters. It's better to give them our time than to give the newspapers our money."

The next morning they sent off the three prints, together with a bill for fifty cents, covering the job. Art was for putting a letter in with the prints to explain the trouble they had gone to,

but Burson demurred and shook his head.

"If this fellow has any knowledge of photography at all," was his argument, "a glance at the films will show him the trouble we took. The fact that we have n't said a word about it will then make a stronger impression than if we had done a lot of boasting."

The next morning's mail contained a letter from their first customer. "It is easy to see that this fellow appreciates our work, by the promptness with which he remits," Burson remarked, as he reached for the paper-cutter.

But the envelope contained only a slip of paper. Burson opened it and read the contents out loud. "You fellows are surely poor photographers"—was the subtle compliment the letter opened with—"and I'll never trust you with my films again. I took nine pictures on that roll of film, and got back three prints out of the lot. Yet you have the brazen nerve to ask me to pay you fifty cents for the privilege of spoiling six of my best pictures. Well, you won't get it, and you ought to feel glad that I don't tell the authorities about your way of doing business."

Art sat silent for a moment after Burson had finished reading. "If that letter was n't so sad it would be funny," he said paradoxically, although Burson knew well what he meant. "It does n't seem as if our five dollars' worth of time is worth thirty cents in the open market."

"There's one thing sure," Burson said, "we must never let a thing like this happen again."

"How are we going to prevent it?" Art asked.

"The only way to do," Burson answered, "is to announce in our next advertisement that we will develop films free provided we get orders to do the printing. It will then be obvious that we are going to do our best to get as many printable films as possible."

"That seems to be the solution," Art admitted; "we'll give it a trial that way, anyhow."

And so the advertisements that appeared the following Sunday mentioned that Burson & Condit would develop films free if they had orders to do the printing.

The day after the new announcements appeared, a large box, about a foot square, arrived at the studio. With it came a letter.

"Looks as though all the inhabitants of some little hamlet had pooled their films and shipped them to us," Burson said, as he lifted the box to the table.

"We'll see in a moment what it's all about," Art announced, opening the letter. "Listen to this," he said a moment later, "it's the richest thing I've come across yet"—and he read:

"Dear Sirs—As per your ad in this morning's *Blaze*, in which you say that you will de-



AZIZ
ANGUS BASIL

velop films free if you have orders to do printing. I am enclosing seven films from each of which I want you to make three prints. I am also sending you under separate cover a box of films that I took on a recent trip through Canada, and which I would like you to develop for me. Of course, as I am ordering prints, I understand that you will develop these films free of charge."

Burson groaned in despair. "It looks as though we'd have to buy out a whole newspaper to explain this little scheme of ours. No wonder these people live in the country. With the little knowledge they seem to possess city-life would exterminate them in the first five minutes."

Another small package had come in the same mail, and Art opened it without a word. "This is something like," he said, handing the letter to Burson. "Here's a fellow who sends in a roll of film and wants us to make a dozen prints of each negative. We can afford to develop films free if we get printing-orders like this."

But a five-minute bath in the developer, a little while later, failed to produce more than a few scattered highlights on each film of the roll.

"This fellow has evidently tried to make a series of pictures of a colored gentleman robbing a hen-coop at midnight," remarked Burson. "He

could just as well have asked for a thousand prints from each negative, if there were n't going to be any we could use."

"Perhaps his lens was stopped way down and he did n't know it, or something like that," Art said. "We'll write and ask him, anyhow, just to keep his good-will and show him that we are interested."

The letter sent off, the boys stopped work for the day, not because they were lazy, but because there was nothing else to be done.

The next morning there was an answer to the letter. "I have your note"—it began—"telling me that the six exposures I sent you were all undertimed. I do not see how this is possible, as we turned up all the lights in the room, on the night I took these pictures, and then, to make sure, I gave each film a time-exposure of almost ten seconds. I don't think you people know what you are doing."

"He's right," Art declared emphatically, as Burson finished the letter, "but his grammar is a little poor. He should have said, 'I don't think you people know what you *were* doing.' I know what we *are* doing. We are going to get out of this photo-finishing business so quick that these small-town boys won't see us for the dust."

The Camera as a Tool of Management

FRANK E. GOODING



"WHAT is it, Fred, a puzzle?" asked the superintendent, as he came into the office and found his assistant perspiring over a pile of small pieces of an engine-piston which lay scattered about on the desk.

"Worse than a puzzle," answered the assistant. "No. 4 engine is wrecked, and I have been here for an hour trying to sketch these pieces in making a report of the accident to the main office. I dread to think of the troubles ahead of me when I try to describe the damage done to the cylinder."

"Why don't you photograph it? No person can make any sense out of those sketches."

When the report went in, a half dozen photographs, together with a single page of comments, made the details of the accident so clear that no extended explanation was necessary.

This was only a beginning toward giving the camera a regular job in this factory. Prints from the same films were attached to the rush-order for repair-parts, and aided the maker of the engine to hasten the repairs.

The camera, however, has many wider appli-

cations to factory-work than merely as an aid in making reports which are not only readable but free of long, detailed explanations. Few executives would bother with long tables of figures, but would insist on having them plotted out in curves where the variations could be easily seen. A photograph short-cuts a detailed explanation in much the same way.

The value of a camera as an asset to the manufacturing-department is not realized fully in a plant which employs a photographer as one of the office-staff. If the camera-man's duties are limited to taking photographs of the successive stages of construction-work, the employer is failing to appreciate the many possible ways in which the photographer can be made to earn his pay.

The usual point of view, as regards the use of the camera in connection with engineering-work, is in regard to the valuable records which may be kept of the progress of construction. Work of this character can be expedited, as well as recorded, by the camera, because the man in charge will want each photograph to show as much more than the previous one as possible. This is his re-

port on work accomplished under his direction.

Similar use is made of the camera in recording the progress in the development of new apparatus at the plant of the General Electric Company. These photographs are of great help to the engineers, and are consulted as frequently as the drawings. In much the same way, all improvements on the product are photographed and placed in a permanent record file at the National Cash Register Company. These prints are much easier to look over and "read" than would be a stack of blue-prints or tracings. Any special ma-

is well to remember that in all drawings to scale which are photographed, the scale should be included in the field of the camera to facilitate measurements on the print.

The judicious use of the camera as an aid to the files in other ways than those employed customarily is worth taking into consideration. Many a letter filed away contains a reference to a print or tracing in the drafting-room files, and valuable time is wasted searching in the drafting-room for the desired drawing. An extra photograph of the tracing, printed at the same time as

Form No. 101 (1-1-1917)

CAMERA WORKS
EASTMAN KODAK CO.

INSPECTOR'S REPORT ON SAFETY DEVICES

Date _____ Inspected by _____ Approved by _____

Draw line through words indicating that defect described was found. Give location and detail below.

Punch Presses Jones Guards, Wheel and Belt Guards, Set Screw Guards, Special Guards. a. guards not provided with necessary guards o. k. b. guards not on o. k. c. guards not in use o. k. Special Presses Speed Ends, Cranks, Endless, Cranks, Cranks, Cranks. a. guards not provided o. k. b. guards not on o. k. c. guards not in use o. k. General a. lubrication o. k. b. adjustment o. k. c. electric and shifter o. k. d. loose o. k.	Shapers Standard Shaper Guards, Special Guards, Belt, Blade, Shifter and Clutch, Blow Pipe and Heads. a. guards not provided o. k. b. guards not on o. k. c. guards not in use o. k. d. guards not adjusted o. k. e. guards in bad condition o. k. f. heads not in position o. k. General a. lubrication o. k. b. shifter o. k. c. blade holder o. k. d. belt, Old and New Guards, Shifter o. k. e. guards not provided o. k. f. guards not on o. k. g. guards not in use o. k.	Joiners Jones Guards, Special Guards, Set Screw Guards, Special Guards. a. guards not provided o. k. b. guards not on o. k. c. guards not in use o. k. General a. lubrication o. k. b. blow pipe and heads o. k. c. both loose o. k. d. motor guards or loose o. k. e. shifter o. k. Special Machines a. guards not provided o. k. b. guards not on o. k. c. guards not in use o. k. d. guards not adjusted o. k. e. guards in bad condition o. k.
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Give Department where Defect is Found. Report on Our Floor Daily.

Form No. 101 (1-1-1917)

CAMERA WORKS
EASTMAN KODAK CO.

INSPECTOR'S REPORT ON SAFETY DEVICES

Date _____ Inspected by _____ Approved by _____

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Give Department where Defect is Found. Report on Our Floor Daily.

MAKING THE "NEGATIVE" ON PAPER —

— AND A "POSITIVE" OF THE SAME COPY

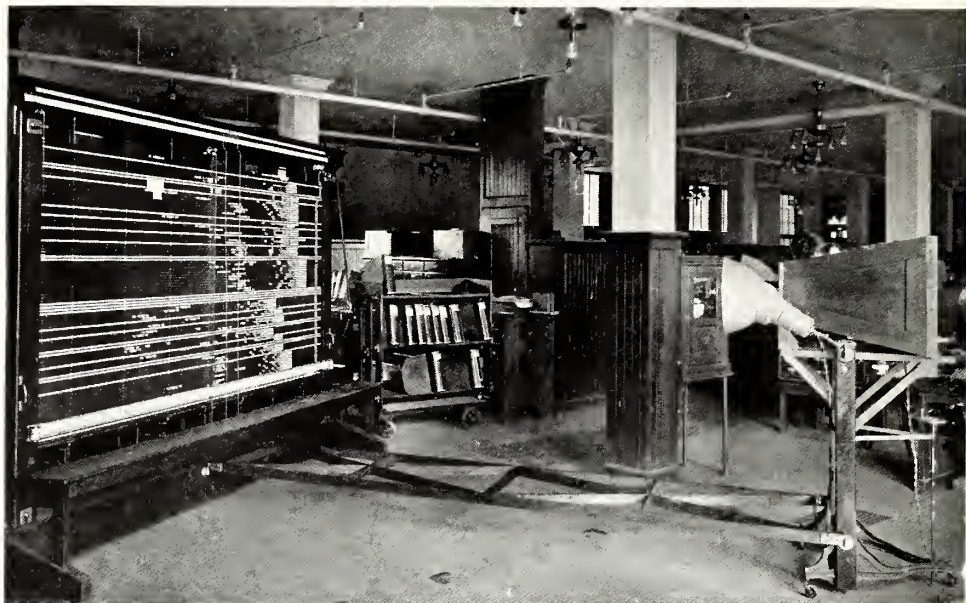
chines or tools built by the company for its own use are photographed and filed also.

Photographs of handy size, let us say 7 x 9 or 8 x 10, can be compared far more easily than the customary-sized blue-prints or tracings. The choice for field-work between, on the one hand, a blue-print waving in the breeze while the foreman vainly attempts to find a fugitive dimension, and, on the other, a small stiff photographic print, is obvious. Surely, the photograph will be referred to oftener than the blue-print, and thus reduce many mistakes occurring because it was "easier to carry it in the head" than to refer to the drawing. This argument in favor of the photograph holds good for shop-drawings as well as for those used in the field. In this connection, it

those for shop-work, would have done away with this delay and annoyance. At the General Electric Company large drawings or tracings are reduced to 8 x 10 — a convenient size for reference or filing — and are considered cheaper than making prints from the large tracings. It is not always necessary to make a tracing, however, as the pencil-lines, if distinct, can be photographed easily.

With the aid of a camera, patent-drawings are reduced easily to a convenient size to file or bind into permanent reports along with the type-written records and claims.

Curves or graphs, which must be kept on the desk or drafting-room table for ready reference, are conveniently reduced in size and still have



PRODUCTION-CONTROL BOARD AND CAMERA-EQUIPMENT TO PHOTOGRAPH IT

sufficient detail to assist in calculations. In work where curves are continually referred to, it often pays to have them photographed and kept under a sheet of clear glass. This keeps them clean, in the same place where they can always be found, and allows the coördinates to be read as easily as from the original. In the drafting-room of the Naval Proving Grounds, photographic prints of carefully plotted curves are used to compute the contents of bumped heads or segments of horizontal cylindrical tanks. The drafting-room or engineering-department of many other plants offers similar examples of this application of photography. These prints are not only more lasting than a blue-print but are a more usable size.

Articles collected from technical magazines and pages from books of reference are brought into small compass by this method. When it is desired to have a number of individuals in a concern retain copies of the same article for their own private files, the camera provides a cheap and ready way. This is especially true if such articles or pages contain illustrations. A technical article on hand when needed is worth a dozen glanced at and initialed a week previous.

Reference-tables of figures form still another class of data which it is worth while to photograph. The difficulty of proof-reading figures is well known, and the camera is more trustworthy than the best stenographer. This refers, for example, to a portion of a log-table, a series of figures on a report, or an acid conversion-table, or

other similar material of which copies must be furnished to a number of draftsmen, executives or laboratory-workers.

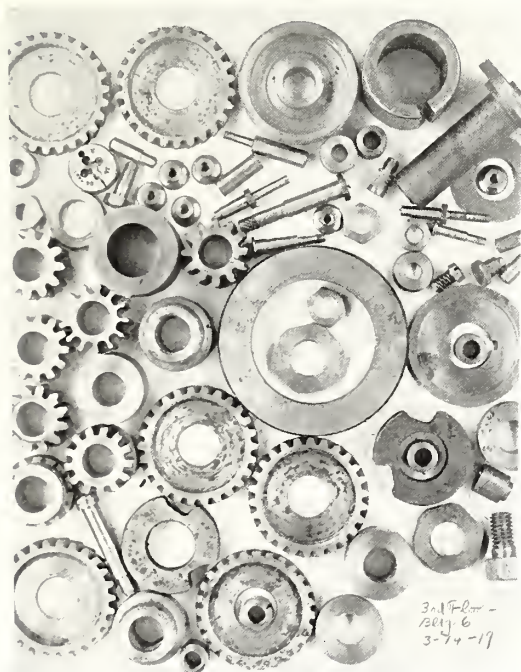
The utility of the camera for small reproductions of maps or charts needs but an allusion to be appreciated. For clear and lasting copies of typewritten sheets, a photograph beats a carbon-copy, although used, of course, only in special cases of unusual importance.

For this same type of work — printed or typewritten pages, tables, sketches or drawings, blue-prints or any similar copy — reproductions may be made directly upon paper by a special camera without making a photographic plate and printing.

In this type of commercial camera a roll of sensitized paper takes the place of the film or glass plates ordinarily used. The reproduction is reversed in color — black for white and white for black — the same as on a negative film or plate; but the image is not reversed, that is, the type-matter, for instance, is readable. This, however, in many cases is not a serious objection. If the copy must be like the original, this reversed reproduction is used as a copy and any number of reproductions made from this negative appear the same as the original. This direct method of reproduction is especially advantageous where only a few copies are to be made, as there is no plate expense attached. For this reason, the cost of photographic prints decreases with an increase in number. The cost of these direct reproductions on paper is in direct proportion to the number of

copies made. This is a good point to remember.

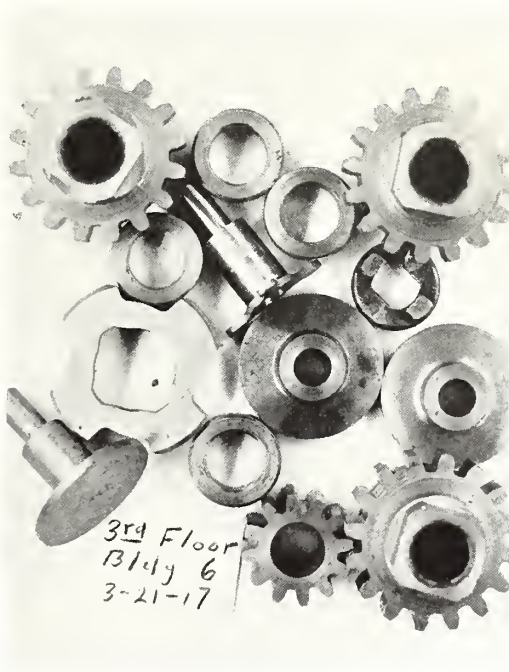
Another job of direct interest and value to the manager to which the camera may be assigned is making daily or monthly records of progress-charts or plan-boards. At the H. H. Franklin Manufacturing Company the production-control boards are photographed every Friday evening, and the set of prints is carefully filed and preserved for future reference. This method of photographing the boards saves a mass of clerical work, with its subsequent opportunity for mistake, as well as doing the work in much less time.



PHOTOGRAPHIC EVIDENCE OF WASTE

paring the daily production over several months.

A rather common use is to photograph all small parts of a disassembled machine and number them, then use this photograph for ordering repairs. One shop, however, does the same with its apparatus, and places a book of these prints in the shop for the men to use in ordering the parts from the stockroom. Most of the men know the part that they want by sight, whereas the name or number is not always as clear to them. This has eliminated many mistakes which had been made previously in ordering the parts from stock. It



FROM THE SAME CANS A WEEK LATER

Light is furnished for the exposure by two 1,000 watt, 112-volt lamps, one on each side of the lens. By careful calculation it was found that the exposure was best at a certain distance from the board; so an arm was made, as shown in the accompanying print, which, when attached to the boards, places the camera at the right distance to give the best exposure. The equipment used for this purpose is brought out in the illustration.

The superintendent of the Dayton Engineering-Laboratories Company photographs on the last day of each month the blackboard in his office showing the schedule of the customers' requirements as well as day-by-day factory production. This is filed and serves to perpetuate the records as well as furnish an easy method of com-

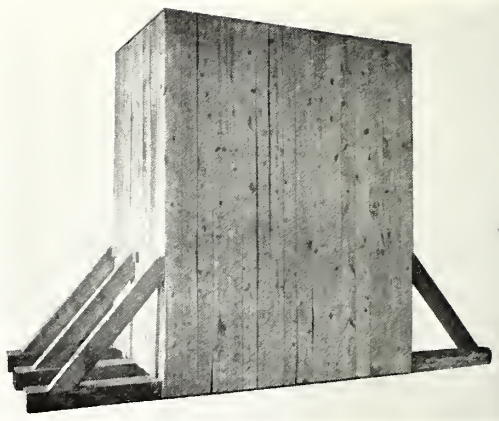
is also much easier than looking up the part on the drawing or otherwise taking up valuable time.

Machinery returned on complaint is photographed upon its receipt by a number of firms, especially if damaged in transit because of insecure packing. Putting this evidence of the shipper's carelessness up to him and asking for his co-operation usually helps more than would several letters explaining the condition of the goods when received. Several firms have found this to be the best way to meet similar difficulties with poorly packed shipments of stock during times of a scarcity of material when the supplier must be handled diplomatically. Claims for damages to goods in transit due to the improper handling of the goods by the carrier are collected more easily

if autographic-photographic records are made of their condition when received.

At the General Electric Company methods of packing and shipping the different apparatus are photographed and used as a standard. The crating and blocking required for domestic shipment of a large oil-switch are shown on this page. When these photographs are placed on record in the shipping-room it is not necessary to study out in detail how a similar job is to be packed, but the workmen are able to go ahead with the job by following the example pictured. At the Dayton Engineering-Laboratories Company, the camera was used in a stop-the-leaks campaign. Here small parts, such as screws, nuts, washers, cams, gears and so on, which careless employees would occasionally throw into the cuspidors or waste cans, were photographed. These were posted and were a big factor in eliminating losses of this kind. The two photographs reproduced on page 287 show a few of these small parts which were thrown away in one of the departments as compared with the smaller number of parts found in the same department a week later. This brings out the result of this publicity to the men.

Records of stock, especially piles of lumber or coal or other materials stored outside, are kept



HOW TO DO A CRATING-JOB

by means of the camera in some plants. Weekly or monthly photographs of these piles show very clearly to the manager the variation in storage-space used through the year. These are only a few of the many possible applications of the camera to the factory. For educational and instructional work, for safety and for planning are a few of the many other advantageous uses of a camera.

The Factory.

The Art of Framing Enlargements

EDWARD LEE HARRISON

THE success of a finished picture depends in no small degree upon the manner in which it is framed. So important did Turner regard this final touch that he never entrusted the selection of frames to a subordinate, and on one occasion, enraged at the jarring effect of a customer's gaudy selection, seized a knife and cut the canvas from its frame, declaring it should never be displayed to such disadvantage. There is no denying the fact that styles in frames change with periods of furniture and architecture. At present, the tendency in both is toward simplicity, and the artist may do well to follow the lead along established lines.

Of course the primary consideration in a frame is color. Unfortunate proportion, both of height to width and borders to picture, may be forgiven or overlooked, but the eye will not be pacified when the colors are discordant. Gold frames seem to be the choice of amateurs, for some unknown reason; yet it is safe to say that eight out of every ten photographic enlargements would be better framed otherwise. There are certain gray

and silver effects, and — in the case of colored enlargements — many pale-tinted creations, which seem to find repose within the gilded border. The average sepia-print will be displayed best in some tone of brown, with perhaps a touch of gold-line, and the gray-toned picture may be set off effectively in black and gray, or combinations of these colors. The use of fancy woods in this connection is always questionable, beautiful as they may appear occasionally.

As a matter of course, the most important question of proportion arises out of the relation of height to width. Although this is often set by the print itself, it should be corrected, if wrong, in the framing of the picture. Of course, no rule can be given, as the nature of the subject governs materially this feature; but it is always safe when in doubt to assume a somewhat long and narrow effect, either vertically or horizontally, rather than a dumpy, square proportion. The proportioning of the exact width of the frame itself to the size of the picture is possibly the most difficult of all the framing-problems, and when a mat is used it does not tend to simplify the mat-

ter. Generally speaking, most light-toned prints are improved by a mat, and some of the dark and heavy pieces may be better finished next to the wood itself, and thus improve the appearance.

It is bad taste to frame a picture in too light a border; but it is worse judgment to "overframe"

(6) Standard ratio of width to height. (7) Sometimes effective for special scenes. (8) Questionable. (9) Very questionable. (10) Bad. (11) Worse. (12) Difficult. (13) Portraits, old-fashioned. (14) Same, but more so. (15) A bad dream. (16) Some one thought he had done something.

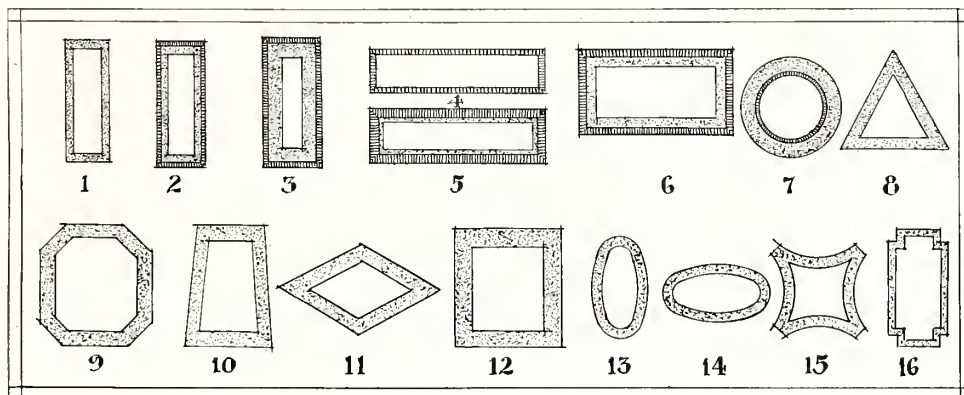


FIGURE 1

it. One hard and fast rule may be laid down with some confidence. The width of the mat and the width of the frame should never be equal. A proportion in the ratio of three to five is perhaps a fair assumption for trial, the general rule being to make the frame narrower than the mat,

The color of mats is another very difficult subject. White and cream are always safe, and a more liberal use of them would help matters. Nevertheless, special and very effective settings have been obtained with sepia, gray, gold and black mats. Architectural subjects are deserving

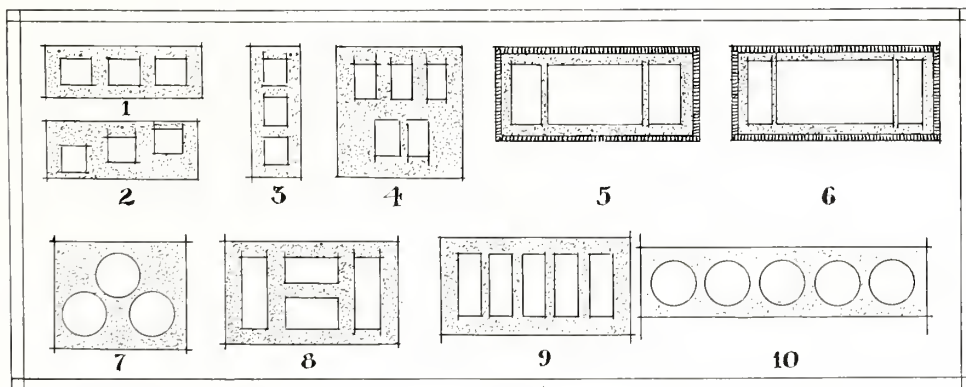


FIGURE 2

although this may be reversed on occasion with good effect, if the frame is unusually heavy.

The diagrams herewith indicate some good proportions, which, nevertheless, must be modified to suit individual effects. See Figure 1.

(1) Good proportion, no mat. (2) Good proportion, matted. (3) Poor proportion, overframed. (4) Underframed. (5) Pleasing effect.

of special mention. Almost invariably they are best set off with a mat of generous width, which should be of double thickness in all pictures of any considerable size, and this is effective usually when a pebbled surface is selected and the opening cut with a steep bevel. The practice of decorating mats with marginal sketches and the shading of mats in various colors are both matters

of questionable artistic and photographic value.

A word concerning the framing of a group of prints under one glass. This system is coming generally into use, especially for scenes and architectural views. A few examples are here illustrated. In general, it may be said that beautiful pictures may be obtained by a conservative use

of this very excellent method. See Figure 2.

(1) Good proportion. (2) Questionable. (3) Bad. (4) Same, but more so. (5) Effective in certain subjects of panoramic nature. (6) Extreme and undesirable. (7) Stove-lid effect. (8) Freight-office style. (9) Good. (10) Good if subjects are akin in interest, size and subject.

Color-Photography

ROBERT THORN HAINES, F. R. P. S.



TRUE photograph in natural colors is one wherein the various objects transmit to the eye colored rays of exactly the same tint as the rays transmitted from the objects themselves, and it means a photograph in colors true to nature produced by the direct action of light on substances. In order to produce such a photograph, it is necessary to employ a sensitive substance on exposure to colored light, which will yield a product possessing the color of the light falling upon it. If a substance could be found which would yield all the colors, it would seem possible to produce the various tints of the objects by the action of light on that substance, whatever it might be.

Objects appear colored because they transmit to the eyes colored rays of light, and they will not appear colored unless they reflect light which has fallen upon them. Although, until now, no single substance has been found which would yield all the colors and tints of nature, it is conceivable that the admixture of different substances in combination, each yielding a portion of the colors, may serve to produce the desired photographic result.

The action of sunlight in altering or destroying the colors of material was first observed at a very early date, and the precise nature of that action has since been fully investigated, and is now thoroughly understood. Colored light seeks to destroy complementary colors, while it retains those similar to its own. Here we have a theoretically sound fundamental law, which if properly applied in conjunction with suitable materials should produce satisfactory results. Since all the colors in nature can be produced by the admixture of three of suitable tints, it is apparent that if pigments of the correct shade be employed, and allowed to be acted upon by the colored light from the objects, each color could be made to destroy its complementary color and retain its own, resulting in a picture faithfully reproducing all the objects in their true natural tints.

A considerable amount of work has been done by a number of investigators, including the author, in the endeavor to ascertain or determine the precise action of light on dyes of various qualities and shades, as well as in the effort to produce satisfactory photographs in natural colors by their use on that principle; but beyond obtaining encouraging indications that success will follow ultimately, when certain difficulties are overcome, no thoroughly satisfactory photograph appears to have been produced by that method.

Although so much has been discovered respecting the character, behavior and fitness of very many dyes and chemical substances proposed to be used as sensitizing- and fixing-agents, it still remains to determine by experiment which of those are most suitable, and the best method to employ them.

There is a bewildering variety of dyes to select from, many of which, under special treatment, have yielded fair results. There is also a large number of chemical substances known to be more or less suitable to sensitize the dyes and render them more fugitive under the influence of light, as well as others to increase their permanency in order to fix the picture when it is obtained. The prospect, therefore, of producing photographs in natural colors by such method is, indeed, very encouraging. Adopting similar principles without the use of dyes or pigments, there appear to be great possibilities in taking advantage of the peculiar phenomenon of the coloring of salts by Cathode rays.

It is known that if Cathode rays are allowed to fall on certain salts, vivid colors are produced in them. Different salts produce different colors, so that a variety may be so obtained. The colors so acquired in a small fraction of a second may be preserved for many years if the colored substances are kept in the dark and at low temperatures, and it is conceivable that they might be made permanent by fixing. A salt if dissolved may produce very different colors according to the medium in which it has been dissolved, even



MORNINGSIDE PARK, NEW YORK

ANTOINETTE B. HERVEY

when the pure medium itself cannot be colored at all by the Cathode rays. Very small admixtures are sufficient to produce intense colors. These salts are very sensitive to daylight, and even after an exposure of a few seconds to diffused light, the coloration diminishes. Longer exposure to the Cathode rays renders them less sensitive to daylight, so that by sufficiently long exposure they become insensitive, and may be thus permanently fixed. If the law which holds that colored light seeks to destroy complementary colors while it retains colors similar to its own is universal, and applicable to these salts, it would only be necessary to prepare a surface with three suitable colors, either mixed in solution or sep-

arated, and, after a short exposure in the camera, the colored lights from the objects would destroy their complementary colors, and leave remaining on the surface a picture of the objects in the true colors of nature. To complete this picture, it would require only to be fixed by prolonged exposure to the Cathode rays. From the positive thus obtained, a negative could be made from which any number of pictures may be produced.

This differs materially from all known methods of color-photography, and being free of the objection that it is an ingenious makeshift, would form a true solution to the problem of how to produce photographs in their true natural colors by the direct action of light on substances.



OREGON GRAPE

CHARLES G. STRUBE, JR.

Close-Up Work with the Short-Bellows Camera

CHARLES G. STRUBE, JR.

THE average amateur-user of the short-bellows hand-camera seldom does close-up work. Very likely he possesses a portrait-attachment, but uses it solely for portrait-work. Most portrait-attachments are accompanied by instructions telling how to use them as near as thirty-two inches. But, with the short-focus lenses, small subjects show up very much too small on the negative. After fastening a ground-glass at the focal plane of the camera and experimenting with different stops and distances, I found that at the farthest extension sharp pictures were possible at twenty-three inches at stop F/8. By using smaller stops, even shorter distances were possible. With the lens on the standard 1A and No. 3 folding hand-cameras the size of the image at twenty-three inches is about three and three-fourths inches to the foot. Thus, by two-times enlargement, even very small objects can be shown somewhat over half size and to advantage.

Another factor in close-up work that is little used

or understood—especially by beginners—is the use of stops. The small stop is useful especially for close-up work when a portrait-attachment is not available or when working with a fixed-focus camera. A little experimenting will soon show a far greater range than was first expected of the camera. I found this to be the case with the fixed-focus vest-pocket cameras.

The ordinary $1\frac{5}{8} \times 2\frac{1}{2}$ vest-pocket camera with three-inch meniscus achromatic lens will make reasonably sharp pictures at a distance of a foot employing stop U. S. 64. The lenses on a few $1\frac{5}{8} \times 2\frac{1}{2}$ cameras do not make satisfactory pictures at distances nearer than about twenty inches. This condition is likely to exist in all makes. In working very close, a small disk in the center of the film is exposed slightly more than the remainder. If the defect is very slight, it may be overcome by overexposing the negative. Light-colored objects on light backgrounds seldom show the disk.

The average No. 1A and No. 3 kodak-type cameras, when used at their farthest



TRILLIUM

CHARLES G. STRUBE, JR.

extension, will make clear, sharp negatives without the use of a portrait-attachment at a distance of about twenty-seven inches and using stop U.S. 64. In this type of camera I have not yet met the



CHERRY-BLOSSOMS CHARLES G. STRUBE, JR.

difficulties sometimes experienced with the fixed-focus type. In all close-up work, extra care must be taken in spacing the picture. The finder, unless it is of the type directly over the lens, is of little value in composing the picture. Sighting over the center of the shutter is fairly accurate. As it is desirable to measure distances accurately, it is advantageous to carry a short tape-measure or — what is better, as it cannot be forgotten — to lay off a short measure, from six to eight inches, on one tripod-leg. If it is a wooden tripod, waterproof india-ink; or if metal, light



NARCISSUS CHARLES G. STRUBE, JR.

file-marks serve very well. From this short measure a longer one can be improvised anywhere — a twig, string or even a long straw.

In all close-up work with a short-focus camera the depth of the subject should be as shallow as possible or grotesque effects are likely to result.



HYDRANGEAS CHARLES G. STRUBE, JR.

The stops and distances given in this article are merely as a basis for experiment. The use of a ground-glass and a few test-exposures will show what each individual camera will do.



I HAVE resolved to devote my life to the cause of learning. In place of a life of ease and freedom, I have chosen a career of anxiety and toil. A man has higher responsibilities than the seeking of his own enjoyment; he should devote himself to honorable labor.— ALDUS, in 1490.



No artist ever began as a master; and it is often late in life that the deeper mysteries of art are revealed, even to the most gifted.

ROBERT SCHUMANN.

Photography in Colors — The Visual Index

T. W. KILMER

IF all of us — after many years of processes photographic — yearn for an indescribable something which we have been unable to acquire. If one be a lover of nature — without which one cannot be a real student of photography — he often wishes to perpetuate for record, sentiment or artistic effect some view which his eye has admired. He wishes to portray this view in all the colors, tints and hues with which nature has endowed it. I think that most of the real, hard-thinking, discriminating people who take up photography for the love of the thing finally arrive at the same point at which I found myself during this past year. I had admired photographs in monochrome, had taken thousands — yea, seemingly millions — of them during the past twenty-five years of my photographic life, yet I had reached a point of photographic unrest. I wanted to portray my scene in the natural colors and with the same softness with which my organs of sight registered it upon the sensitive nerve-endings of my retina. I had tried about all of the color-processes and multiple printings known to man. I had used all the types of lenses ever constructed. I felt as if I desired to attain the unattainable. I did not desire to record many pictures, but there were yearly some twenty to fifty scenes that I had dwelt upon, some many times, others but occasionally — scenes, places and a few persons, all of which I wished to preserve forever just as I saw them, so that in the years to come I could visually feast, as it were, upon the memories of bygone days. How should I accomplish this? I experimented with about every combination known to myself and to my friends. I wanted the view preserved just as I saw it. The first point to be settled was, how did I see it? Certainly not through a hard, anastigmatic organ of sight, and certainly not through a greatly diffused astigmatic organ of sight. Being a strong devotee of the soft-focus lens — because we all have soft-focus eyes — I wandered afield with a $3\frac{1}{4} \times 4\frac{1}{4}$ camera equipped with a five-inch soft-focus lens. I had, as many of us have, a favorite view near my summer-residence, and I determined to fuss around until I obtained the same diffusion on a dryplate that I did with my eyes when I looked through them at this favorite view of mine.

I made many exposures with my lens at various apertures, all the way from full aperture (F/6) down to F/32. I exposed on this favorite

view in the early morning, bright sunny noon and dusky evening, cloudy days and bright days. I frequently held a mirror over my shoulder and peered into it at the view that I might better judge as to how I really saw that view. After repeated trials, I determined that the lens-stop which best suited my individual vision was F/8. I interrogated several of my friends and found that each had his own special visual stop-number; that is, each person saw that view best, or rather the view appeared to him best, at a certain F/ number. It therefore seems to me that every one has his own individual "visual index," comparable to a certain fixed diaphragm-number. For example: A said that the view appeared more natural to his eyes when a print was shown him taken at F/6. B said that the view looked more natural when taken at F/7. C said that A and B were both wrong, to his eyes, the view looked the way it did in nature when taken at F/8. Different persons looking at the same print all have different ideas as to its merits, and I believe that part of the reason for this difference lies in the fact that each person has his "visual index," at which a certain view looks its best to him. Therefore, to determine the photographic visual index of any individual, it is necessary for him to make a series of photographs of the same view with the various stops of a soft-focus lens and select from the prints thus obtained the one which most resembles this view when seen by the eye.

Approaching the subject from this definite point, I felt satisfied that I had solved the first horn of my dilemma, namely, as to how I really *saw* the view that lay before me.

The next step was for me to record permanently this view in its natural colors. I tried all the various color-process plates; I colored the scene by hand upon the finished print; I made lantern-slides and tried to color them true to nature. I had expert artists color prints and slides for me from color-notes made by me at the time of taking the photograph. After thorough experimentation, I decided upon using Lumière Autochrome plates as lantern-slides. A view taken upon one of these plates through a soft-focus lens at the correct "visual index," and projected by means of a small, compact stereopticon upon a screen of not too large dimensions, say of 4×5 feet, is to me the acme of perfected photography. I had all that I desired; there was my view in all its colors, seen upon the screen just as I had seen it in nature. If you feel that you have seen every-



A VISUAL-INDEX PHOTOGRAPH

T. W. KILMER

thing that there is photographic, that you have reached the point where there is nothing more to be done in photography, I beg of you to purchase a few Lumière Autochrome plates, make some slides as I shall tell you, using a soft-focus lens at your own individual "visual index" and project them upon a small screen. You will have a pleasure in store for you. The makers of the Autochrome plates give you full directions in each box of plates, and, better still, is their little booklet. There are, however, just a few "wrinkles" in handling these plates which I have never seen in print. I shall therefore describe in detail the steps in making an Autochrome visual index slide. It is very easy to accomplish. Load your plateholder with the Autochrome plate in total darkness. Do not carry a filled plateholder in your pocket or on the floor of an automobile, especially over the hot engine. Do not fill the holders until the day you are to use them. Develop your plates as soon as you can after exposure. It seems to me that, when using a soft-focus lens in this work, the exposure is lessened very appreciably, and an Autochrome can be made in less time, and at the same stop, than would be required when using an anastigmat lens. I should advise that the yellow Autochrome screen be screwed on or into the lens, as this ensures a perfect parallel. By all means use some form of lens-hood; your

results will be better. It is very necessary to give a full exposure when using these plates for stereopticon-work, as this slight overexposure gives the required clearness to the slide, ensuring the finest results. I find that with my soft-focus lens set at F/8, an exposure of one second, at twelve o'clock, on a bright sunny day, is about right; although if I want to get a perfect sky, I would advise an exposure of three-quarters of a second. Along toward evening (6 o'clock), I give six seconds with good results, and develop the plates in total darkness. I had great trouble with frilling until I learned how to overcome it absolutely. I have a 10 x 16 tray which I fill half an inch with water at 65° F. In this tray I place my two smaller 4 x 5 trays, one holding developer and the other the Potassium Bichromate reversing-solution. I use this solution at double strength in summer, that is, one dram of the bichromate of potash to thirty-five ounces of water, and reverse for one and one-half minutes. By keeping the small trays in the large tray of water, the temperature of the two solutions will remain constant. I place the plate in the developer, count one hundred and fifty (two and a half minutes), rinse plate in the water in tray, then transfer it to the reversing-solution and come out into the daylight. I never take up the plate to judge its density, as the warm fingers will change its tem-

perature and frilling will result. After reversal, I wash the plate for thirty seconds or less in water from the tap or in a separate tray of water. It is dried quickly, an electric fan being a great help. I frequently develop at night, using a 25-watt electric light bulb for daylight. When the plates are dry, I use black lantern-slide binding tape instead of a regular black mask, as by the use of tape I am better able to "trim" my picture. The finished plates are mounted with cover-glass and edges bound with the black paper-tape.

You will hear it said, "Autochromes are too dense for lantern-slides;" so they are, if they are made by some one who does not know how to make them, or projected upon too large a screen. My screen is not larger than 4 x 5 feet. Any good lantern equipped with a white light, such as the electric arc or nitrogen bulb, and a water-jacket to protect the Autochrome lantern-slides, will suffice as a projector and it will do good work.

Those of us who do not make pictures to see how *many* we may produce each year, and who

do not snap every pretty view which we see, but who wish to record a few worth-while scenes, views which mean much to us and which we wish to preserve as lasting documents, by all means should record them according to our individual visual index and in their true colors; for by so doing we shall not only give ourselves a lot of pleasure, but store up a true scenic library for our friends and posterity.

[Dr. Kilmer's statement that, in his hands, the uncorrected, soft-focus lens — stop for stop — is speedier than an anastigmat, might be interpreted as hyperbole, but for the well-known theory that, commensurate with the highest quality of optical glass, the lens having the larger number of reflecting surfaces suffers the greater loss of light and, consequently, is less rapid. Besides, the circumstance that the average soft-focus lens, being partly achromatic and enjoying a freer passage of non-actinic rays, gives to this type of lens greater speed than that possessed by the fully-corrected modern lens.— EDITOR.]

Lantern-Slides in Natural Colors

WILLIAM H. SPILLER



AT the present time considerable interest is being manifested in this country in true color-photography — not color-values only, but real colors on glass positives or transparencies for viewing in the hand or by projection in the optical lantern.

Of the three principal methods in use, the first really practical, successful methods were the Autochrome of Lumière and the Diptichrome of Dufay, with which a large number of workers have had practical experience. Both of these color-systems theoretically are somewhat similar.

The principle of the Autochrome plate and its chemical manipulation have been described several times in previous issues of PHOTO-ERA, and should be well understood by its readers.

How To Make an Autochrome Lantern-Slide

It is not particularly difficult to make natural-color lantern-slides if one is careful, and even a beginner in color-photography will frequently make a splendid example at his first trial. The reader having only an ordinary plate-camera fitted with a view-lens or rapid rectilinear should not be deterred, and even those owners of a Premo or a Kodak, each of which is fitted with a plate-back, may enjoy the fascinating work

and take just as much pleasure as the advanced worker who is using an expensive anastigmat lens in a Graflex camera.

The plateholder should be fitted with kits to take a standard 3½ x 4 plate, which is lantern-slide size. In plateholders having springs in the back to press the plate forward into register, these springs should press very lightly, otherwise injury will be done to the delicate surface of the Autochrome plate, which is placed into the holder glass-side outwards. It is advisable to leave the black cardboard, which accompanies every Autochrome, in place against the film-side of the plate, as this protects the surface very nicely while in the holders.

Exposure

In order to obtain perfect results in the completed lantern-slide, the exposure must be very accurately timed, and with all systems of color-work a meter to determine the actinic value of the light is an absolute necessity; therefore, the writer has not furnished approximate exposures. The well-known meters on the market are the Heyde, Watkins and the Wynne, the two latter requiring a small piece of sensitive paper which changes color under the light-action and is compared with a standard tint beside it on the face

of the meter. The Autochrome plate-speed, including the filter in position on the lens, is given by the manufacturers as Watkins 3 and Wynne 11.

The actual length of time in the exposure of an Autochrome will extend from a fraction of one second to several seconds, depending upon the character of the object, intensity of the light and the size of the opening of the lens-diaphragm. The Wynne meter takes into account all these factors with one setting of the dial, and, no matter what section of the country or altitude of the place where used, the indications will be found perfectly accurate.

The worker should not attempt to take distant views, as in general these are not satisfactory, and it is much better to confine all efforts to near views having some definite object of prominence, around which may be allowed lesser objects artistically arranged by proper position of the camera so as to make of the whole an attractive lantern-slide study.

Development

The makers of these plates furnish a very complete set of directions pertaining to development; but the writer has preferred to work out a simple method for this article which may prove of value to the beginner in the process. The developer used is diamol, or amidol, each giving similar results if mixed in accordance with this formula. Both of these agents use sodium sulphite only as an accelerator, and this is of great value in a warm climate, as sodium sulphite does not have any decided destructive or softening action upon the sensitive film as experienced with alkaline developers containing carbonates or caustic alkalis.

Balagny, in Europe, first advocated the use of an acid-amidol developer, and later E. J. Wall, in this country, gave considerable study and approval to the use of this chemical for Autochrome-development.

Single-Solution Developer

Water	10 ounces	284	c.c.
Sodium sulphite, anhydrous	120 grains	7.73	grams
Acid-sodium bisulphite, commercial solution	4 drams	14	c.c.
Potassium bromide ...	5 grains	.32	gram
Amidol	30 grains	1.9	grams

The developing-solution should be carefully filtered through two thicknesses of filter-paper and used full strength at a temperature of 65 degrees F. In working with Autochrome plates every solution must be filtered, and then there will be practically no complaint arising from

spots on the finished slide. Place the plate in the tray and by the aid of a very faint light, through Lumière Virida papers, pour on quickly the developing-solution and immediately cover or remove the tray from the yellow-green developing-light. If, from a desire to watch development, the worker allows the developing-light to shine from time to time, it should be only for a fraction of a second. Continue development for precisely four minutes. If this time is exceeded, the resultant slide will be thin, owing to the large amount of silver reduced by prolonged development; if the time is cut short of that stated, the slide will be dense, as there will not be sufficient silver reduced to restrain the light-action during reversal; also there will be left a larger amount of sensitive silver-bromide than is required to produce the proper density of the positive image. For those workers who desire to use a ruby-light, the plate before development may be placed for two minutes in total darkness in the desensitizing-solution:

Water	3½ ounces	100	c.c.
Potassium bromide	15 grains	1	gram
Potassium metabisulphite	5 grains	.32	gram
Acid-sodium bisulphite, commercial solution ..	½ dram	2	c.c.

To make the acid-bisulphite solution, take

Water	1 ounce	28	c.c.
Sodium sulphite	240 grains	15.57	grams
C. P. sulphuric acid	84 minims	5	c.c.

After desensitizing, rinse the plate for not more than ten seconds with clear water at 65 degrees in the tray before pouring on the developer. At the expiration of four minutes quickly pour off the developer and rinse the plate in the tray with four changes of clear water at 65 degrees flowed on in about 3-ounce portions, allowing each amount of water to remain not over four or five seconds.

Reversing

Have ready the following solution, which is to be poured onto the plate in the tray immediately after the last wash-water is thrown out. This solution dissolves the reduced silver, forming the negative image produced by the previous development. The tray and plate should now be brought out into daylight or placed under a strong artificial light, and the plate will be seen to clear, this action being completed in about five minutes.

Reversing-Solution

Water	8 ounces	224	c.c.
Potassium bichromate	8 grains	.5	gram
Chrome alum	30 grains	2	grams
C. P. sulphuric acid	30 minims	2	c.c.



PINNACLE PEAK

Copyright, 1913, A. H. Barnes

A. H. BARNES

Filter this solution through two pieces of filter-paper and use at a temperature of 65 degrees.

After reversing, the plate should be washed in five or six changes of clear water at 65 degrees, in the same manner as advised following the first development, only extending the time of each rinse to ten seconds.

The second development and production of the positive image is now proceeded with by pouring on in daylight the used developer saved from the first development when making the negative. This last development is carried out in daylight or ordinary light of the room and requires practically the same length of time as the first development. As soon as this operation is completed, rinse the plate as previously described in six changes of water for ten seconds each, and put into an ordinary lantern-slide or negative-rack to dry. After drying, the slide should be varnished by flowing over it any good negative-varnish which is free from alcohol, or the varnish may be obtained from the Lumière Company. To protect the slide further, it must be bound up with a cover-glass the same as any lantern-slide, and projected with a water-jacket.

The reader should take particular notice that

at no time after removing the plate from the holder and entering the solutions has the plate been touched with the hands, also all solutions have been filtered carefully through paper, and used at a constant temperature of 65 degrees. If the plate is treated as described, those workers living where the air is warm and balmy will have equal success with those readers in the extreme North, where the temperature of water is like that of melting ice.—[Reprinted, by special request, from PHOTO-ERA of February, 1915.—ED.]

ALTHOUGH professional art critics are now virtually forced to acknowledge the eminent artistic character of the work of the photo-pictorialist, they shrink from making comparisons unfavorable to the painter, whose performances elicit admiration largely on account of the beauty of color and atmospheric effects. In the realm of landscape-photography, portraiture and genre, the photo-pictorialist already excels in originality of thematic conception, simplicity of composition, perfection of drawing, breadth of treatment and interpretation of human emotion. This very issue contains notable examples of artistic work by American photo-pictorialists.—W. A. F.



EDITORIAL



Dishonesty Somewhere

IT is well known that proprietors of certain retail-stores charge off at the end of each fiscal year a certain percentage of goods as stolen or missing. A still greater loss is prevented by a special system of protection. The existence of pilfering or collusion is thus acknowledged. Dealers in photo-supplies have suffered not only from burglary, but from theft—direct and indirect. Serial numbers placed on cameras and lenses have not proved a sufficient safeguard, as they could be obliterated. We understand that certain manufacturers have hit upon a scheme of marking their goods in a manner that the thief will find difficult, if not impossible, to discover. Not satisfied with the safeguard provided by the manufacturer, some dealers add their own marks of identification, in this way hoping to reduce thefts to the minimum. Dealers or their detectives will thus be able to trace stolen cameras, lenses and other valuable photographic goods, and, eventually, the person who possessed himself unlawfully of articles for which he is unwilling or unable to pay. Firms that deal partly in such merchandise may find it to their advantage to eliminate this feature from their business and to procure photo-supplies through regular channels. They will make more money in the long run.

Objective and Subjective Treatment

AS art is universal, so is the application of its principles. Pictorial photography, the youngest of the fine arts, benefits by the rules of composition, perspective, proportion and harmony. As a medium of artistic interpretation, too, the camera is eminently expressive. In the manner of presentation, it may be suggestive or it may be realistic, just as it suits the temperament of the user. In the terms of the painter, the photographer may treat his subject as it exists—realistically—or he may idealize it. In the one case he renders the subject as it appeals to the eye, in the other as it appeals to the mind. Approaching his task with enthusiasm, and full appreciation of the external beauty of the theme before him, one camerist treats it objectively; whereas the other, impressed with the possibility to express something of his inner self, treats the theme subjectively. Herein lies the secret of the successful appeal of a picture to the imagination,

and, strange as it may seem in these days of material things, a picture—painting or photograph—that deals with cold, bare facts does not attract and hold attention nearly so long as one that contains feeling, sentiment and suggestion, and whose complete story is revealed gradually. Parallel cases may be found in every great art-collection, and it may be interesting to note that though the artists of the fourteenth and fifteenth centuries may have lacked perfection of drawing and composition, they evinced a sincerity of purpose and a spiritual feeling that are absent in the works of the religious painters of to-day. The photographer, like the painter, is impressed by the artistic possibilities of a subject, be it a human being, a landscape or a marine. He then approaches it in proportion to his mood of feeling, and sets about to interpret its beauty. His personality, his style and method will reveal themselves in the progress of the work—from the conception of the theme to the execution of the ultimate result. It is a mistake, however, for some workers to think that a mere technically perfect negative can be converted into an artistic masterpiece by enlarging it with a soft-focus lens or printing it through bolting-cloth or other diffusing-material. Results obtained in this manner do not deceive discriminating observers. There must be in the original negative meritorious composition, expression, character—in fact, the foundation of a good picture which succeeding stages of artistic treatment will transform into a thing of beauty and perpetual joy.

Prices of Photo-Material

IN view of the almost general tendency to raise the retail-prices of food-stuffs and manufactured articles to an unreasonable extent, it is gratifying to note that those of photo-supplies have suffered virtually no increase. However, last May, several manufacturers of small cameras found it absolutely necessary to advance their retail-prices fifteen percent, and the continuing advance in the cost of raw materials will no doubt cause a corresponding increase in the prices of these goods. This is specially true of equipments that require expensive materials, such as cloth and metal. But in any event, these increases will be sure to be fair, reasonable and consistent, which is characteristic of the honorable attitude of photographic manufacturers towards the public.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is repayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

Quarterly Miscellaneous Competitions

THESE will continue to be featured in PHOTO-ERA competitions during 1917 and 1918, so as to afford more opportunities to our readers to win official recognition.

Awards — Spirit of Summer Competition Closed September 30, 1917

First Prize: James W. Pondelicek.

Second Prize: H. B. Rudolph.

Third Prize: R. J. Morrow.

Honorable Mention: Chas. J. Belden, W. R. Bradford, F. E. Bronson, D. J. Crittenberger, Martha Curry, O. C. Dean, J. T. Dimbleby, Louis A. Dyar, Mrs. C. B. Fletcher, Harriet J. Goodnow, Bertran F. Hawley, Henry W. Jones, Benjamin F. Lippman, Rufus F. MacComas, Alexander Murray, Kenneth D. Smith, W. Steleick, Wm. J. Wilson.

Subjects for Competition — 1917

"Vacation-Pictures." Closes October 31.

"Domestic Pets." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Still-Life." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Shore-Scenes." Closes August 31.

"The Spirit of Summer." Closes September 30.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

To Participants in Photo-Era Contests

ACCORDING to Rule 5, a print that receives a prize or Honorable Mention becomes the property of PHOTO-ERA MAGAZINE. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition. The matter has been treated editorially in April and August PHOTO-ERAS.

Certificates, on parchment, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention in PHOTO-ERA competitions.



THE SPIRIT OF THE DUNES

Copyright, 1917, James W. Pondelicek

JAMES W. PONDELICEK

FIRST PRIZE — SPIRIT OF SUMMER

Spirit of Christmas — Advanced Competition Closes January 31, 1918

To nearly every red-blooded man, woman and child the thought of Christmas brings an indescribable thrill of anticipation. The man thinks of home and those near and dear to him; the woman also thinks of home and her dear ones — particularly the children; but to the youngsters it is the event of the year. There is a spirit of good fellowship abroad in the land, and even the proverbial "grouch" endeavors to smile. However, this year, those of us who still have our homes and our loved ones about us should not forget that there are many whose relatives or friends are "over there," giving their all that we may enjoy our Christmas in happiness and security. This Christmas finds the United States, too, drawn into the maelstrom

of war, and on that account let us radiate as ever the spirit of Yuletide, but let us temper this same spirit to the times and not flout our happiness in the faces of those less fortunate than we.

Now, if ever, let photography enter our homes, for another year may find Christmas-day without the presence of a loved one, and a picture may become all that we have left to recall happier days. It is not my object to shroud Christmas in gloom; but it is imperative that I try to bring home the fact that cameras should be used this Christmas as never before. Let there be economy in the food and prodigality in the use of plates and films. Remember that the boys "over there" are just as eager as ever to be home, and the best substitute that we can offer them is pictures of our Christmas family-circle. Although our sons in France or on the high seas may not be very exacting

as to the artistic and technical value of our pictures, let us strive to make each exposure as nearly perfect as possible. It should be remembered that future generations will place great historical value on our present photographic efforts.

Perhaps the picture of greatest sympathetic appeal is one of the Christmas-tree. Although it is without doubt the most popular subject that we could select, it is also the most difficult one to make. Its many scattered lights and decorations, glittering tinsel and hanging baubles—in violent contrast with the dark green of the tree itself—make the Christmas-tree a difficult photographic problem. However, with due care the difficulties may be overcome and a picture obtained that will be a delight to the entire family and, at the same time, be very appropriate to the present competition. If the tree alone is to be photographed, a combination of daylight and flashlight may be used successfully with regard to illumination. In favorable circumstances, daylight alone may suffice. If the picture must be made at night, a prolonged exposure by electric- or gas-light supplemented by a flashlight will do admirably. In connection with the tree, a grouping of playthings, gifts and decorations should be arranged so that all are in harmony.

If it is desired to photograph a group gathered about the Christmas-tree, the problem becomes more difficult immediately. Virtually the only solution of the exposure-question is in the use of a flashlight, aided by such electric, gas or daylight as may be available and convenient to employ. Needless to say, the greatest care should be exercised during the preparation and use of the flashlight. A Christmas-tree is an ever-green, and hence highly inflammable. All the old, well-known rules with regard to making flashlight-pictures apply to groups about the Christmas-tree. In addition, one should be sure to maintain the center of interest and not permit an annoying confusion of subject-matter to spoil an otherwise excellent Christmas-picture.

The children hold the center of interest in nearly every Christmas thought and deed. Directly or indirectly, they are responsible for the beauty, love, kindness and good cheer that radiate on Christmas-day; hence pictures of the children are the most highly prized of all. No one need be at a loss to think of suitable subjects which include children. Hanging the stockings, filling the candy-bags, tying up the presents, pecking at the Christmas-tree, creeping about in search of Santa Claus, tumbling out of bed on Christmas morning, undoing the presents and many other subjects will suggest themselves to fathers, mothers and those of the family-circle possessed of a camera. Do not trust to chance to furnish suitable material, but rather plan everything out carefully beforehand, and with the help of the children strive to create in concrete form the beautiful Christmas thought that you had in mind.

This year the family, and particularly every man in it, should receive special attention. As already pointed out, a year from to-day may find one or more missing from the family-circle, and pictures made at this Christmas should be technically perfect for reasons that are obvious. In this connection, it should be remembered that these pictures are of greater value, perhaps, to those that are away than to those that stay at home. Despite the seriousness of this advice, it does not follow that the family-circle be portrayed as sorrowful; on the contrary, let every face beam with happiness, and thus let it send out a feeling of good cheer that will renew and strengthen the courage of every member of the family at home and abroad.

In recent years, a snowy Christmas has been rather rare, even in the northern parts of the United States and Canada. However, this year Santa Claus may visit us amid the whirling snow, and we should be ready with our cameras. Gathering the Christmas-greens, bringing in the Yule-log and kindred outdoor subjects would be welcomed by the judges. Likewise, boys and girls with their sleds, or making a snow-man or having a snowball fight would make admirable material. In the city, the Christmas-shoppers, the hurrying throngs on the streets, the small-ware and toy pedlars, the children gazing longingly into shop-windows and a portrayal of the wistfulness of the poor—all would furnish the camerist with innumerable opportunities. It must be remembered that to do justice to these and similar Christmas-subjects the camerist *must* enter into the spirit of the scene. Unless he feels the very heartbeats of the subjects before him, his picture will be but a record-photograph—and nothing more.

Exteriors and interiors of churches—with or without people—offer many attractive bits of unusual subject-matter which, in proper hands, may be used to good advantage. Choir-boys singing Christmas-carols, worshippers at the altar, people entering or leaving the church—with a sprig of holly in buttonhole or muff—social worker delivering Christmas dinners to the poor, the Sunday-school Christmas-tree and other church activities furnish good material at this season. Then, again, the church-building itself may suggest an appropriate subject by its architecture, location or history. In passing, it occurs to me that a picture depicting an old sexton ringing the church-bell on Christmas-morning in obedience to the command "Ring out those Christmas-bells," and showing his face illumined by happy thoughts of the present and of long ago, might, if carefully done, be made a welcome change. Another subject along similar lines would be to mount the belfry and photograph the bell-ringer while he plays Christmas-carols on the chimes. Of course, care must be taken to show unmistakably that it is Christmas-day; otherwise, again, we have but a record-photograph. We might even include the organist, providing that we can make his portrayal thoroughly convincing. These suggestions may be thought rather far-fetched; but I mention them in the attempt to awaken contestants to the fact that conventional, stereotyped Christmas-pictures will win small favor with the judges. Originality will have precedence over conventional, hackneyed themes—no matter how well they are done. Contestants should remember that six persons gazing at the same subject invariably see it from six different points of view. A Christmas-tree is a conventional subject; but if it is placed differently, decorated differently, lighted differently and photographed differently it becomes something original—something that your neighbor cannot do as well as you.

Winter-landscapes, unless very carefully thought out, do not lend themselves readily to the portrayal of the Spirit of Christmas. Nature comes to our aid in most other competitions, but with regard to Christmas, "nature unadorned" usually fails us as an ally. No matter how beautiful the snow sparkles in the sunshine, or how magnificent the snow-covered mountain-range may be, without the human element it is simply winter; and such a picture would be just as appropriate in February—there is nothing about it that reminds us that it is Christmas-day.

A subject that will be taboo is one showing the family seated about a Christmas dinner-table that is heaped with food. It is hoped that we may all enjoy our Christmas-dinner; but let us bear in mind that moderation on our part will ensure a saving of sufficient food to



THE LAST QUARTER

H. B. RUDOLPH

SECOND PRIZE — SPIRIT OF SUMMER

feed many of our boys "over there," as well as to nourish many others to whom what we leave on our dinner-plates constitutes the difference between life and death. Pictures of jolly Christmas dinner-parties therefore should be relegated to the past or saved for the future. Instead, gather the family about the open wood-fire or fireplace and, by means of a flashlight, illumine the faces with a soft glow that will reflect Christmas good cheer and that will cause happiness instead of pain. These days our hearts must look beyond the narrow horizon of self. Some of our neighbors may know the pitiless sting of war as we do not.

The Spirit of Christmas Competition of 1917 is like no other ever held in the long life of PHOTO-ERA. This year Christmas has a deeper and more spiritual significance than any other within the knowledge of this generation. There must be good cheer, happiness and gifts; but there must also be thoughtfulness, courage and sacrifice. The camerist who can portray the Christmas-spirit of 1917 must strive as never before. To express, pictorially, that which lies too deep for words is an undertaking worthy the best mental and physical effort. Above all, make each picture speak the truth. Let absolute sincerity govern every step, so that the beholder feels and appreciates what the Christmas of 1917 means throughout the world. Prize-winners in this momentous competition will have reason, in the years to come, to rejoice that they were enabled to portray, in a picture, thoughts which thousands carried in their hearts but were unable to express.

A. H. B.

How England Treats Prisoners of War

PHOTOGRAPHY in one of its most beneficent and convincing forms is exemplified by a thirty-two page brochure, entitled "German Prisoners in Great Britain," which contains over fifty photographs in halftone — ten of the plates being $6\frac{1}{2} \times 9$ inches (full-page) — scenes in six of the largest prisoners' camps in Great Britain — Donington Hall, Alexandra Palace, Dorchester, Handforth, Lofthouse Park and Eastcote. A special edition of this book contains over one hundred halftones. They illustrate nearly every aspect of life in the camps, and show that the living-conditions of the prisoners is well-nigh ideal. The quarters offer every reasonable comfort, and opportunities for entertainment and sports, at all seasons of the year. The book has pictures of beautiful gardens, evidencing the prisoners' love of floriculture and showing the men busily caring for the plants; extensive vegetable gardens; swimming-pools; poultry-yards; playgrounds, with the men playing football; tennis-courts (games in progress); miniature yacht races in the large pond; a band-concert in the barracks square; the sailors' siesta (resting in hammocks), and of other outdoor activities. Indoor-life is depicted by pictures of the theater (a dress-rehearsal); the reading-rooms; the toy-factory; the carpenters' shop; the tailors' shop; the recreation-room; the billiard-room; the Y. M. C. A. games-room; the post-office (parcels arriving from home); the barber's shop; individual prisoners busy with their hobbies — artists (finished portraits of Emperor William),



AS THE STORM ROLLED BY

R. J. MORROW

THIRD PRIZE — SPIRIT OF SUMMER

cabinet-makers, model-makers and needle-workers. The larger pictures of the book illustrate more important subjects, viz., the spacious sleeping-halls, one of which is the nave of a cathedral; the dining-hall; the kitchen; the bakery; the canteen and the chapel. There are also several large groups of prisoners, and views of the different camps.

Everywhere a spirit of ease and contentment seems to prevail — due to the statement in the foreword that the prisoners were left entirely free to choose whether or not they would be photographed. The photographers were given explicit instructions that no prisoner was to be photographed without his consent, and that neither compulsion nor persuasion was to be employed to induce any one to form part of a group. These instructions were strictly carried out, and it is significant of the readiness with which the men allowed themselves

to be photographed that repeated requests were received by the authorities that copies of the photographs should be placed on sale in the camps.

These interesting photographs were made in response to a request received from Ambassador Gerard, when in Berlin, by the photographic section of the Royal Flying Corps, and exhibit first-rate technical ability. Persons interested may procure copies at any of the offices of the Cunard Steamship Company in the United States and Canada; or, if need be, by addressing the request to PHOTO-ERA.

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Camerist (in public gardens) — "Can you tell me, does this belong to the arbutus family?"

The Custodian — "No, sir; it belongs to the corporation." — *London Sketch*.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS
With Reviews of Foreign Magazines, Progress and Investigation
Edited by A. H. BEARDSLEY



Those Faulty View-Finders

THE use and abuse of view-finders is ever an interesting problem. *The Amateur Photographer*, speaking editorially, presents some excellent suggestions that are of much practical value. "Hardly a week passes without we hear of complaints from amateurs that the view-finders on their cameras give an altogether different image from that which is included by the lens. Of course this is, to a large extent, quite true; it would be an almost impossible task to construct a view-finder that would give virtually the same picture as that which would fall upon the plate or film, and fit it to an instrument of moderate price. When the worker finds that his view-finder has played him false, he should examine his camera thoroughly and satisfy himself completely upon the following points, and the partial solution of the difficulty will be near at hand: (A) Whether the finder is in a direct vertical or horizontal parallel with the lens. (B) If it is of the square-form fitted to the cheaper hand-cameras, and intended to be reversible, whether the worker has, for instance, included in the vertical position those parts of the finder right and left that should belong to the horizontal, or, in the case of the latter, the two strips top and bottom that belong to the vertical position. In finders of this sort where the nicks at the corners are not present, it is a good plan to rule two lines from right to left near the top and bottom with Brunswick black and a fine brush for the horizontal way of the instrument, and also two similar lines for the vertical position. (C) If the shape of the finder is in a scale with the size of the plate or film in use. (D) In the case of a brilliant finder, has it been viewed from the central position above it? Finders of this kind viewed from the side or from top or bottom will give a different angle of view from that when viewed exactly from the vertical center above. It may be pointed out that nine-tenths of the trouble that we hear of in this direction is caused by neglect of some of the points mentioned above. With near objects, of course, greater care is needed in view-finding, as distant subjects will almost invariably be found the same in both finder and negative. It is when the subject is ten feet or so away that the finder should be examined, and all due allowance made that is deemed necessary."

Diffusing the Focus

THE question of diffusion is one that is of interest to every camera-worker. A writer in *The Amateur Photographer* gives a method that is not absolutely new, but always of value to know. "It is sometimes wanted to obtain an even softness in the definition over the entire picture, and for this a soft-focus lens is generally regarded as an essential. The present writer recently, when attempting a landscape-subject, managed this by puffing a cloud of cigarette smoke across the lens during a rather long exposure. The result was an agreeable softness over the whole of the picture. This, however, needs some care, and to obtain the best result, a good quantity of smoke should be drawn into the mouth, and then sharply exhaled in the form of a cloud across the lens, the reason for sharp exhalation being to break up tendrils of smoke that would have a bad effect upon the picture and produce streaks. The above has been

suggested before when diffusion is wished for, when using the enlarging-lantern, but we have never seen it previously advocated as a valuable aid in landscape or even portrait-work in obtaining an even diffusion over every plane in the composition."

Permanency of Autochrome Positives

IN view of the fact that the permanency of Lumière Autochrome plates is sometimes questioned, a Lumière expert was asked to make a statement with regard to this important matter. In reply he said that an Autochrome plate properly developed and protected from sunlight will not fade. Moreover, he added that he had one that hung in a window, southern exposure, in direct sunlight, for three years, and that at the end of that time it had faded very little. However, *if Autochromes are not re-developed sufficiently to remove all unreduced silver*, they are apt to fade or stain in time.

In connection with the permanency of Autochrome transparencies, we were pleased to receive a call from Mr. George H. Lane, of York, Pa., who is a veteran Autochromist. Strangely enough, he showed us a rich, clear and beautiful positive made on one of the first Lumière Autochrome plates sold in the United States, in 1907. The subject was a graceful group of the American and Argentine flags, and was made after Mr. Lane arrived in South America just ten years ago.

Photographing Animals

A CONTRIBUTOR to *The Amateur Photographer* gives several interesting facts with regard to photographing animals. "One of the secrets of success in this branch of work is in catching and retaining for a moment the attention of the animal. This can usually be done by making a suitable noise. *Dogs* — the buzz of a bee or mew of a cat. *Cats* — a scratching noise, such as one can make by drawing a pin over rough paper. Young cats are usually attracted by slowly moving a feather attached to a bit of thread. *Cows* — generally pay notice to the well-imitated bark of a dog. *Sheep* — are similarly attracted, but in their case the noise, if too loud, will set them on the run. *Horses* can usually be attracted by a shrill whistle. It has been stated that horses can hear a higher note than that barely audible by human ears. *Poultry* — every one is familiar with the clucking sound usually made in the farmyard by those who feed the fowls."

Physical Reduction for Negatives

AN excellent method for the physical reduction of negatives is found in a recent issue of *The Professional Photographer*. "Ground cuttlefish and resin mixed in equal parts make a very good powder for rubbing down an over-dense part of a negative. The best way to use it is to take some of the powder on the finger-tip and rub with a circular motion on the part to be reduced. If the part is too small for this method, use the powder on the point of a paper-stump. For large spaces, where more friction can be used, fine pumice and the finest grade of emery mixed together make a very good powder. The emery should be the grade used by opticians and jewelers."



BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$5.00.

Second Prize: Value \$2.50.

Third Prize: Value \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. ***Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

6. ***Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.***

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of ***stiff*** corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

Awards — Beginners' Competition

Closed September 30, 1917

First Prize: J. H. Saunders.

Second Prize: Alvah G. Clark.

Third Prize: Ralph H. Blohm.

Honorable Mention: Alfred Cohn, George W. French, Emil H. Kopp, Jr., Henry L. Osborn, Alice J. Platt, Geo. P. Russell, E. W. Underhill.

Special commendation is due the following workers for meritorious prints: Geo. W. Dell, Louis G. Kurtzeborn, Edgar Rutter, Joseph S. Sylvester, Jr.

Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

A Photographic Jewel

October 26, 1917.

Dear Doctor French:

I have a number of near-jewels in my library, but Anderson's "Pictorial Landscape-Photography," published by you and awarded me as prize in "Our Contributing Critics" competition, must be regarded as a diamond. I shall read it many times for pleasure and shall study it diligently for profit.

With best wishes, I am

Very sincerely yours,

W. H. LAMB.



ADJUSTING THE SAIL

J. H. SAUNDERS

FIRST PRIZE — BEGINNERS' CONTEST

Christmas and the Camerist

ASIDE from the gift of a camera, most amateur-photographers receive comparatively few photographic Christmas-presents. By that, I mean that many relatives and friends seem to hold to the belief that the gift of a camera is all that is needed to equip the camerist completely and efficiently for any photographic work to be done. Possibly these well-meaning people think that a developing, printing and enlarging-equipment is included within the camera, or that trays, graduates, chemicals, fixing-boxes and developing-tanks are no longer required. True enough, if the camerist is a push-the-button-and-run-to-the-corner-drug-store-with-the-film type of worker, a camera without even a carrying-case is sufficient photo-equipment. On the other hand, the camerist who is in the game for all it is worth needs and will appreciate many photo-accessories, which will enable him to improve his work and the efficiency of his equipment.

Let us suppose, for example, that a member of your immediate family received a new camera last Christmas. During the year he may have added such photo-accessories as he could afford on those that he needed the most. We will further assume that he has grown tired of developing his films in the improvised dark-room beneath the cellar-stairs and that his one desire is to obtain a developing-tank. Unfortunately, the size of tank needed costs about seven dollars, and, in these times, that amount is just seven dollars too much. However, if the members of the family can be made to forego the giving of neckties, sleeve-supporters, fancy suspenders and pocket-knives in favor of concentrating financially on the seven-dollar developing-tank, our camerist will be gladdened on Christmas-morning, and at the same time the family-resources will be conserved. We hear much these days of "community-activities," why not have community—or better, family—Christmas-presents to deserving camerists.

Needless to say, seven-dollar developing-tanks are the exception rather than the rule; but the fact remains that the family, individually or collectively, can do much to help the amateur-photographer enjoy his equipment. It often happens that one new enamel-tray in which to wash prints completes an otherwise incomplete set of trays. Metal or wooden clips with which to hang up films to dry are always welcome. Stirring-rods and paddles with which to handle prints save the appearance of finger-nails and help to avoid staining the prints. Tray-thermometers and stirring-rod thermometers are invaluable for mixing solutions and during development. Direct-view finders are gaining favor steadily and are now supplied to fit nearly all makes of cameras. Spirit-levels are a necessity to the careful worker who wishes to avoid showing water running up or down hill. Ray-filters, and their value in photographing landscapes, cloud-effects and flower-studies, need not be emphasized. There are many kinds and at all prices. Their selection should depend on the work to be done. Extra plate-holders can always be used to advantage, and likewise printing-frames. Enlarging-cameras are now used widely and are an excellent addition to any camerist's equipment. There will always be a demand for a substantial tripod, particularly for interior exposures. To this should be fitted a ball-and-socket joint to permit the camera to be tilted to any desired angle. Albums to hold the pictures are essential, and enable the camerist to present his work neatly and in orderly sequence. In this connection print-rollers are of great assistance, and likewise a jar of pure photo-paste. Without continued enumeration, it should be added that photo-chemicals are now expensive and that many camerists would appreciate an ounce or a pound of their favorite developer as a Christmas-present.

Many times I have pointed out that in most cases a photo-fan is not the reader that a baseball fan is known to be. A man that is interested in the "great national

game" will rattle off the names of players, box-scores, batting-averages, games to be played and other information as if he were an expert; whereas many photographers must be coaxed to read even the photographic magazines, to say nothing of the excellent books on photography now on the market — particularly those endorsed by PHOTO-ERA. Baseball-fans consider their time well spent to keep informed on the very latest developments of their favorite game. Why should not photo-fans be as well-informed? There seems to be a prevailing impression that most books on photography are "too deep" for the digestion of the amateur. True; there are many highly technical works that are beyond the average amateur; but it is just as true that there are many interesting and readable books that would do the camerist much good to read.

Every amateur-photographer should be a subscriber to one or more photographic magazines — domestic and foreign — and he should own a few standard books on theoretical and practical photography with at least three good books on composition. Some may say, "Why read these books when the direction-book that came with my camera gives me all the information I need?" The answer rests with the individual camerist. However, it may be noted that the amateur-photographers who are successful and whose names appear at Exhibitions and Salons *have read and do read* photographic literature carefully, thoroughly and exhaustively. Those who wish to give a camerist a Christmas-gift that will be of permanent and educational value should see to it that he is given a subscription to a standard photographic magazine and that he is given at least one reliable work on photography and one on composition.

It has not been my intention to be exhaustive in my Christmas-gift suggestions. If I have succeeded in arousing the interest of those most vitally concerned, the effort has been well repaid. Without a doubt other means to attain the same end will suggest themselves to relatives and friends of the camerist. Whatever the means employed, I may safely say, in behalf of amateur-photographers in general, that each photographic Christmas-present given will be deeply appreciated because it was unexpected and because it may have been beyond the financial reach of the happy recipient.

A. H. B.

Hypnotism and Photography

EDITORS OF PHOTO-ERA:

Dear Sirs,—In view of the high plane upon which PHOTO-ERA is conducted, may I doubt the wisdom of your seeming acceptance in its pages of there being such a thing as "Psychic Photography," or of the use and power of hypnotism as related in connection with the Indian juggler story.

As mystic and spiritualistic mediums from the Fox sisters to Palladino have been exposed continuously for the mere tricksters they were, it would seem wiser that you should stamp as absolutely absurd and beneath consideration the existence of the slightest truth in such claims, the more especially as in the present day our highest authorities deny even the claim of mental telepathy which made so much noise after hypnotism had had its day.

The references in your article to the late Mr. Maskelyne are misleading. He was not an authority "in spirit-phenomena," but an expert in the exposure of the tricks of spirit-phenomena. As I knew Mr. Maskelyne, I can quote him directly as stating what he stated, again and again, in private and in public, that there was no such performance ever given in India, or else-

where, as the one you quote. At one period of his career Mr. Maskelyne visited India to investigate this and other alleged marvelous tricks of the native jugglers. On his return to England, he stated that he never found one above the level of ordinary sleight-of-hand work, and his offer of £50 to any one there to perform the so-called rope-trick was never taken up.

The story of this arose from an early-traveler's story; it has persisted for years though never confirmed, just as the story of the use of a camera to prove that there was no rope, the audience being hypnotized, has also been proved a myth.

When the late Mr. Heller was giving his performances in the old theater here in New York, known as the Comique, I met him frequently, and, like Maskelyne, he was always greatly amused and disgusted by any belief in spiritualism, mesmerism or hypnotism, declaring that there was nothing that any practitioner in these delusions exhibited he could not beat by still greater mystifying illusions. To prove this, he gave a special "séance," one afternoon, for a lot of newspapermen, many of them his personal friends. I was unable to be present, but my cousin — then on the editorial staff of the *World* — who was there, told me what Heller did that afternoon made his blood run cold, although warned that all was mere trickery. Disembodied heads floated about the darkened theater, armless hands tapped on the shoulder, spirits (!) arose from the stage, floated in air and vanished, furniture moved without visible agency, and altogether my cousin said that it was "ghastly," and would have been nerve and soul destroying in other circumstances.

Weak minds are all too easily influenced — witness the persistence of the alleged miracle in the appearance in the heavens of the angelic archers at the battle of Mons, which turned the tide of battle for the French and English. This "miracle" had its rise in a pretty little story by Arthur Machem, the English author. The story spread and spread, till finally accepted, as a veritable modern miracle, by thousands of the credulous, and even by priests and ministers, and was eagerly seized upon by the "occult" societies, and really found persons who solemnly attested that they actually saw the angel-archers and heard their encouraging cries. Machem became so worried by all this that he made every attempt to run down these alleged eye-and-ear-witnesses, but was never able to find them.

The story of the Indian rope-trick is but the story of a hundred incredulous things that fascinate weak imaginations until persistence in the relation makes them accepted by such as based on verity.

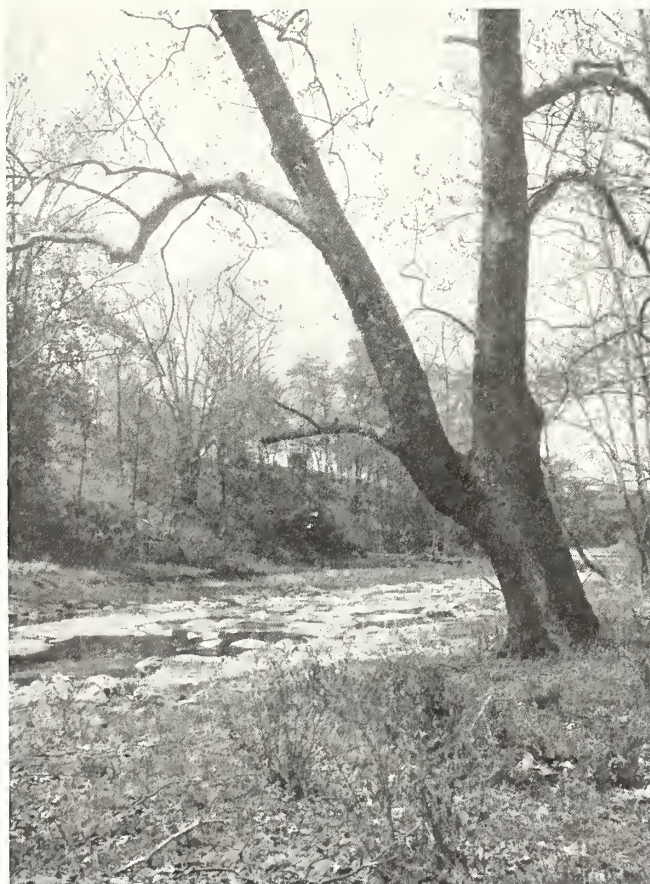
I should like to see PHOTO-ERA ennobling the art of Photography to its highest scientific achievement rather than have it seem to acquiesce in the use of honest cameras and lenses to trick-photography by unscrupulous humbugs.

Sincerely yours,

H. EDWARDS-FICKEN.

[The article "Psychic Photography," referred to by Mr. Edwards-Ficken, appeared in PHOTO-ERA, August, 1917, on the "Crucible" page. We appreciate the interest and friendly spirit shown by Mr. Edwards-Ficken, but we did not intend to go on record as believing in these impossible tricks. The article in question was quoted in the main from a reliable foreign exchange with the desire to bring an interesting incident to the attention of American amateur-photographers. We did not suppose for a moment that it would be taken seriously by real students of psychic phenomena, since they have at hand far more reliable data than those contained in a short quoted article.—EDITOR.]

SECOND PRIZE
BEGINNERS' CONTEST



STONY BROOK

ALVAH G. CLARK

On Approval

The British Journal of Photography comments on doing business "on approval" in the United States. It says: "Our American cousins (or is it brothers now?) are usually credited with being good hands at trading, so that we were rather surprised in looking through some of their recent publications to find that certain writers claim to have done a satisfactory business in enlargements, home-photography and the like, on the basis of payment if the work is approved. On the other side, conditions may be different; but here we do not think such a proposition would be found to pay, in the long run. We have seen too much of the evils of the 'invitation' sitting to wish to extend the principle to copies and enlargements, especially when the orders are obtained by using a mailing-list of strangers. At the same time, we think that photographers as a body might be a little more speculative in dealing with clients from whom they have already received orders. We have known men who have added considerably to their turnover by making enlargements or copies in a superior style from approved pictures, and submitting them after the original order was completed. This helps to fill up dull times, and the few rejects will come in very usefully as specimens."

Showing Autochrome Transparencies

ANY camera-club that desires to entertain its members and friends this winter with a display of Autochrome Transparencies may adopt the method of Alfred Homes Lewis, described in these pages several years ago. It consists of a series of cabinets constructed of thin wood boards, illuminated by powerful Tungsten or Mazda lamps, used at proper voltage, and screened by sheets of glass covered by bluish-white tissue-paper on which rest the transparencies.

Action-Pictures Wanted

ALL who have enjoyed reading the literary contributions to PHOTO-ERA by E. L. C. Morse will be glad to come to his rescue with pictures according to his classified advertisement in this issue. Mr. Morse needs scenes of rural life — a farmer plowing a field, a mower, a man raking hay, a boy going to school, a woman mending stockings or preparing dinner. Likewise, he needs any lively scene in the street — a man at work or a child at play; also, scenes of activity on land or water. Please look over your negatives carefully, without delay, and report to Mr. Morse, for whose honesty of motive and policy PHOTO-ERA vouches cheerfully.



ANSWERS TO QUERIES



Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.

J. G.—To photograph mahogany furniture so that the grain will show, employ a panchromatic plate and an orange-red filter, such as the Wratten & Wainwright Tricolor A. This will record the greatest possible contrast between the lighter and darker portions of the wood, and so make the most of the beauty of the grain. For very dark old mahogany or rosewood it may be necessary to employ a deep-red filter, such as the Wratten & Wainwright F. This should be avoided if possible, however, because the manner in which it overcorrects all lighter tones tends to give a general impression of untruth.

H. W. J.—The Fraunhofer Lines, in spectrum analysis, are the transverse dark lines observed when viewing the solar spectrum in a spectroscope.

D. A. P.—To develop a panchromatic plate, which is sensitive to all colors, that light must be used by which one can see the most with the least possible illumination, which is a green safelight. Such a safelight usually consists of a sheet of glass coated with a bright yellow gelatine film, and another sheet coated with a bright green film, bound face to face, with a thick sheet of green paper between. Obviously these colors must be accurately adjusted in the spectroscope and by trial with the plates. Every manufacturer of panchromatic plates either sells a suitable safelight or recommends one, and the camerist will do well to adopt it.

W. C. R.—The role of potassium metabisulphite in the developer is purely that of a preservative. As such it is conceded to be more satisfactory than the usual oxalic acid in a pyro-formula. For 30-minute development at a temperature of 65 degrees the following is excellent:

A. Water	16 ounces
Potassium metabisulphite	70 grains
Pyro	1 ounce
B. Water	16 ounces
Sodium sulphite, anhydrous	3 ounces
C. Water	16 ounces
Sodium carbonate, anhydrous	1 ounce

For use, take $\frac{3}{4}$ ounce of each stock-solution and make up to 48 ounces with water.

E. A. C.—For landscape-work a two- or three-time filter is usually the best, inasmuch as in clear weather it permits the making of snapshots without the bother of a tripod. Burke & James, Inc., G. Cramer Dry-Plate Company, Eastman Kodak Company, Bausch & Lomb Optical Company, C. P. Goerz American Optical Company and other firms manufacture filters in all speeds and at all prices. We would suggest that, since you have a Goerz V. P. Tenax Camera, with Dagor lens, that you write first to the C. P. Goerz American Optical Company to find out whether or not they are able to supply you with the correct filter. Should they be unable to meet your requirements, it would then be advisable for you to write to the other manufacturers. For portraits the above-mentioned filter would be servicable, but should you wish greater correction it would be possible for you to

use a five- or ten-time filter, providing the subject remained motionless. It is possible for you to obtain plates for your camera that may be used efficiently with any filter. Any standard orthochromatic dry-plate will serve you satisfactorily. From our experience, Cramer, Eastman, Imperial, Wellington, Barnett, Paget, Ilford, Hammer and other makes of dryplates in your size do excellent work.

We would suggest that you write to the G. Cramer Dry-Plate Company and the Hammer Dry-Plate Company, both of St. Louis, Mo., for their booklets dealing with ray-filters. We would also suggest writing to Burke & James, Eastman Kodak Company, Bausch & Lomb Optical Company and other manufacturers for whatever descriptive matter they may have on hand dealing with filters. We believe that after you have carefully read these various booklets, which really are not technical, you will be able to make your own decision to advantage.

S. R.—There are many excellent and safe gas darkroom-lamps on the market. Nearly all manufacturers make one or more models, and we would not have the space to mention all of them. However, by calling at one of the dealer's in New York City, we are sure that he will have on hand what you require. The Eastman professional darkroom-lamps are excellent. With regard to your darkroom in the bathroom, we note what you say about the walls and the use of a piece of red glass. We appreciate the fact that it would be impossible for you to darken the high brick-wall outside of your bathroom-window. With regard to the use of red glass to avoid the light coming from this wall, we beg to say that you should be very careful to buy copper-flashed red glass; otherwise, you will not have a light that is absolutely safe. The smaller the area of the glass, the better it will be, and the less chance for trouble. We take the opportunity of suggesting that a developing-tank would do away with all of your difficulties, since by the use of a changing-bag you could load the tank and then do all the work in broad daylight, with the windows open, and in comfort. With regard to the side from which the light should fall on the subject, there is no definite rule. The entire matter rests with the subject at hand and the conditions under which the picture is to be made. We would refer you to Paul Lewis Anderson's "Pictorial Landscape-Photography," mentioned in PHOTO-ERA, and to Poore's excellent book "Pictorial Composition and the Critical Judgment of Pictures," both of which would be of assistance to you. With regard to an orthochromatic plate without a filter, for portraiture, we believe that for most subjects it would be preferable to the same plate used with a filter.

J. M. B.—With regard to obtaining a soft-focus effect from a sharp negative by means of diffusion in the enlarging, we would say that although diffusion may be obtained by manipulating the lens in the enlarging-camera, this diffusion is not equivalent to the same diffusion obtained from a negative made from a soft-focus lens. Also, it is possible to take an anastigmat lens and by careful manipulation to obtain more or less diffusion. This, however, requires extraordinary skill, and cannot be done in every case, since it is a well-known fact that every anastigmat lens, no matter what its position with regard to the plate, will produce some one plane sharply. There are two ways that we believe might be of assistance to you to obtain the desired effect. One is to obtain a soft-focus lens and make your negatives with it. The other is to make your negatives with an ordinary lens and enlarge them through a soft-focus lens on an enlarging-camera. Both methods will obtain diffusion.



PRINT-CRITICISM



Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.

G. C. R.—Your picture is top-heavy, has too much contrast and scattered interest — above being the dark woods, and below, the brightly illumined road, divided sharply by a two-board fence — the highest light in the picture. With the use of a color-screen or color-filter, you doubtless would have obtained better color-values and less contrast. The bridge appears to offer more pictorial possibilities than your entire arrangement. The road itself is not picturesque, and the fence least of all.

J. A. E.—In your picture, "Road in the Park," the tree at the extreme left is superfluous. It would have been better if it had been omitted. Also, the tree at the right in the distance is too deep in tone. It might easily have been softened in the negative or, possibly, in the print. Otherwise, the picture expresses a beautiful outdoor spirit, good perspective, and is otherwise attractive.

M. R. P.—Your near landscape contains a blank piece of sky in the shape of a square in the upper left-hand part of the picture. This should be filled with a cloud, if you have one in your negative, or you might make the picture over again, posing the figure against a better background. At present, the landscape is incomplete. Furthermore, the contrast is too glaring between the dark landscape and the white figure. There appear to be no color-values, which might have been procured with the proper kind of plate and ray-filter. Moreover, the entire figure looks as if covered with whitewash, or some equally glaring white substance. The legs of the figure suggest some value of flesh-tint; but this is absent in the arms, neck and face of the figure — totally untrue to nature, yet possible to render correctly by orthochromatic photography.

G. E. M.—The print you sent us for criticism is very dirty, showing very careless manipulation in printing or developing, or both. Also, the water-line is not level, which is a common error and *entirely* inexcusable. If not in the taking of the original picture, you could have avoided it by trimming.

K. D. S.—Your interpretation of the "Spirit of Summer," representing a young girl in white and abbreviated costume in dancing attitude, out of doors, against a dark background of shrubbery, merits commendation. The young girl, in her attitude of unrestrained joy, hands above her head, is admirably symbolic of this subject, but unfortunately her hands are close together, and, with the bracelet around the right wrist, give the impression of the hands being shackled. This is of minor importance compared with the background, which, originally very spotty, has been doctored very obviously, the white spots being toned down to bring about a sort of harmony in the background. This, also, re-

duces the sky behind the bushes to a very low tone, whereas the foreground is brilliantly illuminated by the sun. The pose of the figure is natural and convincing and is exceedingly well balanced.

J. S. S.—"The End of a Perfect Walk" — a rather poor title for a picture where a young man appears to be hurriedly scrambling over a wooden gate — is too symmetrical to be pictorial, with a tree on each side; but there are pictorial possibilities in the scene which could have been utilized to better advantage. The definition is unpleasantly sharp. A print made through one sheet of thin transparent celloid might be better.

G. W. D.—Your picture, "Sunshine and Shadow," lacks perspective, and the receding path through the woods appears to be in one plane. This is due to faulty focusing and improper lighting. The scene as a pictorial motive is very promising.

H. T.—Your picture of a garden-scene is filled with life; but from an artistic view-point, white shirt-waists do not appear to advantage in a landscape against dark foliage. If the shirt-waist of the young girl in the foreground could be softened, either by reduction of the negative or by some other means, it would look much better. At present, the contrast between the almost black shadows and the very white dress-material is altogether too marked and a pleasing effect marred.



WILD ROSE

RALPH H. BLOHM

THIRD PRIZE — BEGINNERS' CONTEST

Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of the time in the table. From 8000 to 12000 feet use $\frac{1}{2}$ of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

HOURL	MONTH AND WEATHER																			
	JAN., NOV., DEC. †					FEB., OCT. †					MAR., APR., AUG., SEPT. ¶					MAY, JUNE, JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
11 A.M. to 1 P.M.	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
10-11 A.M. and 1-2 P.M.	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
9-10 A.M. and 2-3 P.M.	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	1^*	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	1^*	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$
8-9 A.M. and 3-4 P.M.						$\frac{1}{5}$	$\frac{1}{2}$	1^*	$1\frac{1}{2}$	3^*	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$
7-8 A.M. and 4-5 P.M.											$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$
6-7 A.M. and 5-6 P.M.											$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1^*	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
5-6 A.M. and 6-7 P.M.																$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$	$1\frac{1}{2}$

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

SUBJECTS. For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky ; very distant landscapes ; studies of rather heavy clouds ; sunset- and sunrise-studies.

1/2 Open landscapes without foreground ; open beach, harbor- and shipping-scenes ; yachts under sail ; very light-colored objects ; studies of dark clouds ; snow-scenes with no dark objects ; most telephoto-subjects outdoors ; wooded hills not far distant from lens.

2 Landscapes with medium foreground ; landscapes in fog or mist ; buildings showing both sunny and shady sides ; well-lighted street-scenes ; per-

sons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground ; buildings or trees occupying most of the picture ; brook-scenes with heavy foliage ; shipping about the docks ; red-brick buildings and other dark objects ; groups outdoors in the shade.

8 Portraits outdoors in the shade ; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, to glades and under the trees. Wood- interiors not open to the sky. 48 Average indoor-portraits in a well-lighted room, light surroundings.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

For Perpetual Reference

For other stops multiply by the number
in the third column

Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply $1/16 \times 4 = 1/4$. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class, $1/16 \times 1/2 = 1/32$. Hence, the exposure will be 1/32 second.

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

U. S. 1	F/4	$\times 1/4$
U. S. 2	F/5.6	$\times 1/2$
U. S. 2.4	F/6.3	$\times 5/8$
U. S. 3	F/7	$\times 3/4$
U. S. 8	F/11	$\times 2$
U. S. 16	F/16	$\times 4$
U. S. 32	F/22	$\times 8$
U. S. 64	F/32	$\times 16$

Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.

Ilford Monarch
Lumière Sigma
Marion Record
Seed Graflex
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.

Anso Speedex Film
Barnet Super-Speed Ortho.
Central Special
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Imperial Special Sensitive
Seed Gilt Edge 30
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.

Barnet Red Seal
Cramer Instantaneous Iso.
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Ilford Zenith
Paget Extra Special Rapid
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.

American
Anso Film, N. C.
Atlas Roll-Film
Barnet Extra Rapid
Barnet Ortho. Extra Rapid
Central Comet
Imperial Non-Filter

Imperial Ortho. Special Sensitive

Kodak N. C. Film
Kodoid
Lumière Film and Blue Label
Marion P. S.
Premo Film-Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso. Speedy
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.

Cramer Banner X
Cramer Isonon
Cramer Spectrum
Defender Ortho.
Defender Ortho., N.-H.
Eastman Extra Rapid
Hammer Extra Fast Ortho.
Hammer Non-Halation
Hammer Non-Halation Ortho.
Seed 26x
Seed C. Ortho.
Seed L. Ortho.
Seed Non-Halation
Seed Non-Halation Ortho.
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.

Cramer Anchor

Lumière Ortho. A

Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.

Cramer Medium Iso.
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.

Barnet Medium
Barnet Ortho. Medium
Cramer Trichromatic
Hammer Fast
Ilford Chromatic
Ilford Empress
Seed 23

Stanley Commercial
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.

Cramer Commercial
Hammer Slow
Hammer Slow Ortho.
Wellington Ortho. Process
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.

Cramer Contrast
Cramer Slow Iso.
Cramer Slow Iso. Non-Halation
Ilford Half-tone
Ilford Ordinary
Seed Process

Class 100, P. E. 11 Wy. 3, Wa.

Lumière Autochrome



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

A New Photo-Era Contest

MANY of our pictorial contributors evince so high a degree of intelligence in their criticism of pictures in general that, in order to stimulate and help develop this valuable faculty, we have introduced a new competition. It consists of the reproduction of a photograph lacking good composition. To him who sends us the best criticism, before the twentieth of the current month, we will send, postpaid, a copy of "Pictorial Landscape-Photography," by Paul Lewis Anderson, price, \$1.50. In the event of several criticisms (not exceeding three) being satisfactory, they, too, will be awarded copies of the book.

The successful replies, not to exceed one hundred and fifty words, together with the picture criticized, will be published on this page in the second succeeding issue.

The subject of composition in landscape-photography is one that interests every camerist. Naturally, more exposures are made of landscapes than of any other outdoor-subject. The main thing to be remembered is the

principle of simplicity and harmony. Mr. Anderson is an eminent exponent of pictorial photography in its highest sense, and he has never appeared to better advantage than as the illustrator of his now celebrated work, "Pictorial Landscape-Photography." The book is devoted to an exhaustive analysis of the qualities that are necessary to a successful open landscape, in summer or in winter, wide country-road, a view with a stretch of water or to a landscape with a single figure as accessory, as shown in *fourteen full-page halftone plates*.

Successful Criticisms

ONE is confused by the array of spotted lights found in the sky, in the water and the white birds. There is no point of rest for the eye. To remedy this, *trim!* Cut off the top third. Instantly the greater part of the confusion is gone. Our eyes naturally rest on the swans, the motive of the picture, without conflicting highlights. The restful feeling expected of a pastoral is still lacking, however. Motion, when indicated, should



THE PICTURE CRITICIZED THIS MONTH

lead the eye into the picture, not out of it. This is done by making the wider space between the moving figures and the border in front, not behind. Now try this: take the trimmed print, cover the left swan with the thumb of the left hand, and, eureka! — we have three swans, properly placed, well held together, almost in composition — a picture.

H. F. ROBINSON.

THE picture "Follow Me!" appears to have too much halation in the right-hand upper corner. The trees and shadows of trunks, at the right, divide the picture. The swan near the left margin is overdrawn, and forms a line with the others, which railroads the eye out at that side. The sky-reflections, in the foreground, are in the same tones as the swans, and are distracting. Negatives should have local reduction. My judgment leads me to cut off $1\frac{3}{8}$ inches from the right, and, on the left, a strip including the entire first swan. This gives the picture good proportions, with the two right swans as fulcrum and the one at the left as balance. Cutting off one-half inch from the lower margin brings the birds nearer the foreground and eliminates some of the unpleasant highlights. The four tree-trunks in the picture, thus formed, bend toward the center and draw the picture together.

M. N. BREMON.

To my mind, Mr. Buchholtz's picture lacks unity, as I find myself unable to keep the swans within the picture-space. The eye first catches one swan going out of the picture, at the left. Following the line of swans backward through the picture, we find ourselves at the open space at the upper right-hand corner. Immediately reversing the procedure, we see that the swans have come in through this opening and are about to swim out in the wake of the leader, at the extreme left. Then, too, the rectangle of light at the right-hand side of the picture, extending from the sky and lightened foliage

down through the clear space in the water to bottom of picture, is also objectionable. The picture would be improved, to my mind, if it were trimmed from the left just behind the leading swan, and the upper right-hand corner darkened a little in the printing, even if the distance were sacrificed.

FRANKLIN I. JORDAN.

WHEN we place animate objects in a picture, especially in an attitude suggesting movement, we should allow space accordingly. In "Follow Me!" the swans are going out of the picture. And just one behind the other, nearly equally spaced, is not good grouping. The placing of such objects in a picture should be controlled, partly at least, by the composition of the particular setting. In this the natural opening for the birds to be swimming toward is at the right. As to the setting, it would be better were it not so equally divided by the shore-line. The nature of the birds calls for more of a water-picture, hence the landscape part should be more subordinate. The setting, as it is, would be greatly improved by trimming a good half-inch from the left.

BERTRAM F. HAWLEY.

IS the technically excellent photograph "Follow Me!" the swans seem placed unfortunately, leading, as they do, too suddenly across and out of the picture. Then, the beautiful landscape, with its rather obtrusive reflections of the trees in the foreground, vies in interest with the swans, serving to establish another case of a picture with two motives. I feel that this picture could have been improved by the selection of a different view-point, or by a little judicious trimming of the print, say $\frac{1}{4}$ of an inch from the right edge, adding that much, if possible, to the left in front of the leader of the flock, thereby bringing the swans more to the right and leading the eye into the picture in a more agreeable manner.

CHAS. A. HUGHES



OUR ILLUSTRATIONS

WILFRED A. FRENCH



WHAT tender memories cluster around a picture that tells a sincere and simple story, a saintly one—a mother's love! A group such as has been pictured by Katherine Jamieson—this issue's frontispiece—has a freshness and directness that surpass the labored effort of the professional painter, who must have so many sittings, during which the spontaneity and first thrill of delight are lost, giving way to a mechanical, unsympathetic arrangement in color that provokes admiration as an artistic achievement and seldom causes emotional interest. In beholding the work of Miss Jamieson, one feels that she has truly expressed the joy of young motherhood, whose depth and beauty touched not the brush of a Titian or a Raphael, a Reynolds or a Lawrence, but seemed to await the magic interpretative power of the camera—in the hands of a capable and sympathetic artist. The painted masterpieces in the world's art museums lack the soul and personal appeal that characterize the work of the modern artist-photographer. This statement may seem like heresy; but let the sceptic bring forth his proofs and I will match them, each and all, photograph against painting. The master-photographer will prevail—at least, in the portrayal of human emotion. Miss Jamieson's modest achievement takes us captive because of its manifestly human touch and its artistic beauty of composition and treatment. The print was inscribed by Miss Jamieson: "He who taught me first this mother love" (Mrs. Browning). Data: Regular professional studio; August, 3 p.m.; west light; 11 x 14 portrait-camera; 12-inch Goerz Celor; full aperture (F/5.5); quick bulb-exposure; dryplate; pyro; print on Haloid paper.

To criticize Mr. Davis' illustrations—pages 270 to 274—is to praise them; and to do so is but to repeat what has been said so many times in this department. His work is characterized by sustained artistic and technical excellence. Data: "Fifth Avenue from a Motor-Bus," page 274—August, 9.15 a.m.; diffused light; $\frac{1}{100}$ second; F/6.3; 6-inch Ilex anastigmat; $3\frac{1}{4}$ x $4\frac{1}{4}$ Cramer Inst. Iso. "A Glimpse of Fulton Street, New York," page 272—9.35 a.m.; bright summer-day; $\frac{1}{25}$ second; F/6.3; Cramer Inst. Iso. "A Wet Morning," page 272—Late February, 9.30 a.m.; dull and cloudy; $\frac{1}{10}$ second; R. R. lens, pocket-camera; F/7; Ansco Speedex film.

Among the artistic performances of the year by American professionals is the photographic panel consisting of three groups, from living models, entitled, "Art, Future, Music," by Melvin H. Sykes, of Chicago, page 275. In arrangement, the picture suggests a triptych; but unlike many efforts of this kind it expresses unity of thought. Mr. Sykes' picture certainly represents an ambitious effort, and does credit to his imagination, taste and skill. Each theme is self-centered, consistent and well designed, and reveals painstaking study of the works of great painters. No data.

The dramatic figure of "Aziz," page 283, was one of the sensations of the London Salon, 1916. Oriental in suggestion and design, the picture expresses great dramatic power and passion, though the premeditated action leaves room for speculation. Here the artist has shown great originality and resourcefulness. The figure is posed against a background of an appropriately

sumptuous pattern, both forming an harmonious ensemble. No data.

How really delightful and satisfying a winter-effect may be obtained with a totally uncorrected lens composed of a single piece of crown glass, in the hands of a user other than its inventor, is shown on page 291—"Morningside Park," by Mrs. Hervey. The delicate tracery of an early snow permeated with sunlight has been rendered with extreme felicity. Data: December 19, 1915; sunlight; Karl Struss lens; F/16; Seed 26 plate; rodinal; 5-time color-screen; $\frac{1}{2}$ second; print on Cyko Glossy.

The series of flowers, in their habitat and in vases, pages 292 and 293, shows the excellent technique, skill and taste of one of our younger contributors. The method of procedure is explained in Mr. Strube's article.

The visual-index landscape, by Dr. Kilmer, page 295, is explained in that gentleman's own article, which illustrates his unusual versatility in camera-work. The most satisfactory result, using the original color-print, would have been a facsimile-reproduction, exactly what Dr. Kilmer and the Publisher would have liked; but it was decided finally to present the picture in straight halftone through the medium of a pan-chromatic negative made by the photo-engraver. The color-values have been rendered very successfully, notwithstanding.

The very wintry scene from the camera of A. H. Barnes, page 298, is a typical aspect of the Cascade Mountains, Oregon. The picture represents the famed skill of Mr. Barnes as a mountain-photographer, whose views of the mountains of the Pacific Coast lack nothing in artistic and truthful presentation, particularly as regards the choice of illumination most favorable to the subject. Data: March, 1916; sunlight; 4 x 5 Peco; 6-inch Oymar; F/16; Cramer Inst. Iso. Double-Coated; enlarged Eastman Bromide print.

Advanced Workers' Competition

THOSE of our readers who, though not participating actively in the PHOTO-ERA monthly competitions, are interested to note their ever-changing character and progress will remember the stress that was laid by the Editor on the accuracy of the interpretation of the theme "The Spirit of Summer." The contestants who achieved the highest degree of success are those who profited by the editorial suggestions, whereas many of the less fortunate ones evidently had not taken the trouble to study the subject profoundly, and, consequently, produced pictures that failed even to suggest the meaning of the theme to be treated, although attractive as pictures without an apparent motive. To be sure, R. J. Morrow—in his exceedingly beautiful landscape—has introduced no human interest with which to associate the spirit of summer, yet he makes a successful appeal to the imagination. The matter is referred to again below.

It would be difficult to excel the novelty and beauty of Mr. Pondelicek's conception of the theme "The Spirit of Summer," the subject of our September competition. The artist has consulted the history of classical art, of which we are now enjoying a sort of renaissance.

sance, and has pictured a scene expressive of ebullient joy. The setting is admirable in its artistic simplicity, the sky is smiling and the total arrangement harmonious and masterful. Data: Indiana sand-dunes; August, 1917, 5.30 P.M.; 8 x 10 Eastman view-camera; 18-inch P. & S. Semi-Achromatic lens; F/8; $\frac{1}{35}$ second; 8 x 10 Standard Orthonon; K2 ray-filter; pyro; Professional Cyko contact-print.

With usual love of the pictorial, H. B. Rudolph has given us a living example of a summer-sport, with appropriate concomitants of the season, page 303. The artist, a consistent prize-winner, has exercised excellent judgment in forming his group of speeding horses; even the last in the procession inclines obligingly towards the center of the picture. The proportions are admirable, and, while the four racers are foremost in the matter of interest, one cannot ignore the faint, curving line of spectators and the effective setting of the park and sky. Data: July, 1917, 3 P.M.; hazy light; 5 x 7 Century; 7-inch Euryplan anastigmat; F/4.8; $\frac{1}{1400}$ second (Multi-Speed shutter); Seed 30 plate; hydro-metol, in tray; enlarged part of negative on P. M. C. Bromide No. 2; Kathol-hydro for development; clouds printed in from separate negative.

Mr. Morrow's fascinating landscape, page 304, appears to lack the visual elements of the summer-spirit. It is not convincing, in the ordinary sense, but inclines towards the spiritual in sentiment, conveying to the mind a subtle feeling of the joy of being in the open, in close touch with nature — far from things material. The composition is spontaneous and unobtrusive, and with its diffused treatment of outline and detail reminiscent, yet independent, of the style of Corot. Data: June, 4.45 P.M.; dull light; $4\frac{1}{4}$ x $6\frac{1}{2}$ camera; Verito lens; F/8; 4-time color-screen; $\frac{1}{2}$ second; Imperial S. S. Ortho.; Amidol; $6\frac{1}{2}$ x $8\frac{1}{2}$ enlargement on Wellington C. C. Bromide Rough; Amidol.

Beginners' Competition

OUR consistent contributor, J. H. Saunders, of Leeds, England, evinces a happy facility in photographing children at play. The picture of a little girl stretched out on the sandy beach studying a toy sail-boat, page 307, shows him at his best. He is to be commended for selecting a model dressed in thorough keeping with the theme. Even the toy-craft is in harmony with the light tonal scheme. There is not a harsh note to be seen anywhere; not a gradation is lost; and the color-values, throughout, have been rendered faithfully. No data.

In a lower key, and also true to nature, is Mr. Clark's "Stony Brook," page 309. The progression of planes in this harmonious, well-balanced view is admirable, which is creditable in view of the fact that the author is a hustling professional photographer. Data: May 21, 1917, 11 A.M.; bright sun; $3\frac{1}{4}$ x $4\frac{1}{4}$ Voigtlander Bergeheil camera; 5 $\frac{3}{8}$ -inch Heliar; F/11; stop, between F/11 and F/16; $\frac{1}{2}$ second; Eastman Speed Pack; Monomet developer, $\frac{1}{2}$ strength of that used for paper; Cyko Enlarging print; metol, Cyko formula.

The portrait of a wild rose, by R. H. Blohm, page 311, is an unusually artistic bit of photography. The setting is somewhat obscure, and the background has lost its obtrusive character. This happy result is due to exposing for the flower, proper, which was near enough to the camera — and the lens-stop sufficiently large — to throw the "busy" background completely out of focus and obliterate form and detail. The light on the flower and the color-relation of the delicate pink are alike praiseworthy. Data: June, 1917, 11.15 A.M.; lens at F/6.3; bright light; Hammer Double-Coated Ortho.; pyro; direct 4x5 print on Normal Rexo Matte.

New York State Professional Photographers' Society

A MEETING of the Executive Committee of the New York State Professional Photographers' Society was held at Baggs Hotel, October 31, at Utica, N. Y.

Those present were: president, F. E. Abbott, Little Falls; secretary, E. U. Smith, Honeoye Falls; treasurer, Edwin Park, Oneida; Mary A. Stewart, Canandaigua; F. E. Spedding, Ithaca; F. E. Hewitt, Corning; E. H. Stone, Hamilton; W. E. Bacon, Utica; C. Olszewski, Utica; W. G. Mandeville, Lowville, and C. K. Frey, Utica. The meeting was called to order by President Abbott, and by unanimous vote C. K. Frey was chosen permanent chairman of the Executive Committee.

Letters were read from Past-President E. L. Mix, of New York, W. E. Talbot, of Schenectady, and Geo. W. Thompson, of Ilion, expressing regret at not being present, and pledging their support of the Metropolitan Section in the coming State Convention.

The matter of the coming State Convention was thoroughly discussed, and it was decided to hold the convention on February 26, 27 and 28, 1918, at Hotel Utica, Utica, N. Y.

Many valuable suggestions were offered to make the next convention of special helpfulness, and that photographers write the president whatever they think would tend to make the convention better.

E. U. SMITH,
Secretary.

F. E. ABBOTT,
President.

Why My Photographs Are Bad

UNDER this title, a copiously illustrated 8vo. book, by Charles M. Taylor, was published several years ago. It describes and illustrates eighteen common errors in technique committed by beginners or careless workers. Any one would think that errors such as making a building appear to be falling over; a horse having a head several times normal size; a lake with the water-line running violently uphill, or *two* pictures made on *one* exposure would be things of the past. But no! Such ludicrous mistakes are committed very frequently at the present time, and Mr. Taylor's book shows how they can be avoided, and, in addition, contains twelve full-page pictures that the author considers specimens of good photography.

This book has been virtually out of print for some time, but PHOTO-ERA has just procured the few remaining cloth-bound copies, and offers them at \$1.00 each, to be sent, postpaid, anywhere in the United States. See that your erring camera-friends mend their ways!

A Source of Danger

THE increasing use of rotary print-dryers makes the following item from *The Photographic Dealer* particularly timely. "Recently an accident occurred with a rotary print-dryer in the following manner. The machine was stopped through failure of the electric current, and, through a tap not being completely turned off, a quantity of gas collected in the top of the drum. A little later, when the electric current was on again, the operator put a lighted match into the drum with the object of relighting the burner; an explosion followed, which caused serious injury. Electric heating combined with electric driving is the ideal; but where this is not possible the same care must be exercised with the heating burner as with an ordinary gas-oven." This danger is due to no defect of the print-dryers, but rather to the human equation.



ON THE GROUND-GLASS

WILFRED A. FRENCH



Professional Photographic Terms

A NUMBER of the members of the ——— Camera-Club were perusing the magazines, when Jones remarked: "This continual 'cussing' gets on my nerves. There's fo-cussing scale and fo-cussing screen, sharp fo-cussing and careless fo-cussing." Thereupon a fellow-member remarked: "You read it wrong, Jones; it is focusing." "Then, why don't they spell it right," replied Jones hotly, "don't they know that the present participle is formed by simply adding the suffix ing to the verb? By doubling the s, you naturally throw the accent on the 'cuss,' the same as in caressing, addressing, forgetting. You would not double the n in summon, reckon, or button. But if they want to fo-cuss let them keep on. Perhaps they need to."

American Slang in France

THE following anecdote is told about Al Mason, the fearless Yankee war-photographer, soon after he had arrived at the front. Al was not proficient in French, but managed to get along without making serious breaks. One day when engaged in recording moments of an exciting episode, near Verdun, he discovered that his supply of roll-film had given out. Luckily, a French camerist, not far away — who used a similar camera — came to the rescue, sending him a film with his compliments. Eager to reciprocate, Al sent him a box of cigarettes. Then, turning to a French officer near-by, Al asked, "What is the French for fifty?" "*Cinquante, monsieur.*" "*Cinquante, cinquant!*" Al shouted with good-natured abandon over to his new friend, who is wondering to this day what Al meant by those words.

An Old Trick Revived

SOMEWHERE, stored away in my attic with other large photographs that, once upon a time, excited wonder and admiration, is a figure of a young dancer, with arms outstretched, hair and skirt flying in the breeze, one knee upraised, and in the act of whirling around on the toe of the other foot. Her face is aglow with excitement, and the whole picture teems with animation. This picture, with the perfection of tonal gradation and detail, was the subject of unstinted admiration of thousands of photographers at one of the National Conventions, a great many years ago — I think that it was in 1885. The author of this masterpiece was James Landy. Very little could be learned about the lens, shutter and length of exposure. One thing was certain, however, that it originated in Mr. Landy's studio. I had the picture framed and placed in my office, where I could admire as well as study it. I finally made up my mind how the feat had been accomplished. Very simple, indeed! The model had been posed carefully on the floor of the studio — on top of a white background. The hair and dress had been arranged as if driven by a strong wind — a gale, in fact. The camera — a 20 x 24 heavy and cumbersome affair — was placed or hoisted into position above the prostrate model, the operator standing, possibly, on a ladder, and from a considerable height focusing the image, inserting the platcholder and making the exposure. It was the shadows that gave me the clue to the long-existing mystery.

I subsequently communicated my discovery to Mr. Landy. He said nothing to the point, but patted me on the back, remarking that a little knowledge was a dangerous thing.

Well, I noticed a similar picture a few weeks ago, only it was less cleverly executed than Mr. Landy's achievement. The girl, here, seems to fly through the air, ahead of fluffy drapery, and a scarf of like material held aloft by both hands. The background is deep black. Invisible shadows tell no tales. But the light material, yielding ostensibly to the force of a violent wind, does not cling to the parts of the body and limbs facing it, and is several inches *in advance* of the hands that hold the fluttering scarf! The effect is very picturesque, nevertheless; but not convincing to those who know.

Darkroom Efficiency

It must be a fine thing to be able to turn out a steady stream of ideas "in the quick forge and working-house of thought." There is one man who, I guess, can do it standing on one leg. He wrote about an idea in an American paper; his article was quoted in another American journal; then it overflowed into a British weekly; now I am going to dish it up; and I dare say that by this time it has been translated into Chinese, Cherokees and Chinky-chowky. He first states that it is a reprehensible and slipshod habit to fix things with a nail and a bit of string, and then proceeds to advise resorting to these very things for all sorts of purposes. First of all, he hangs on a string a brush for dusting plates. This keeps it handy, and when he lets go of it, the jerk shakes out the dust. So he says. Then he nails up a knife in the darkroom to open boxes of plates, a job accomplished much more speedily and effectively by a lump of dynamite. The same knife cuts the weasand of spools of roll-film. He also strings up his bottle of retouching-medium, and a sheet of glass-paper for sharpening pencils. Also he suspends by a similar rope a slab for his spotting-color, and hangs another brush to wipe hairs, paper shreds and cockroaches off the negative before putting it into the printing-machine. I dare say that he strings up his camera, in case he mislays it, and the receptionist, so that she can be found in her loop in business-hours; but he mentions only a paddle for ducking prints in the fixing-bath. The string for this last is fitted with a coiled spring, so that it flies up out of the way with a good lively jerk. As a little idea of my own, I would advise the use of a big nail and an extra strong rope for another useful purpose not yet mentioned. The suspended rope is fitted with a loop which leaves the photographer's feet about a foot from the floor when he kicks away the chair on which he has stood to put the loop around his neck. This saves the time and expenses of a certain Government official.— THE WALRUS.

She Did Her Bit

THERE WAS a young woman named Pearl
Who set the men's heads all a-whirl;

When she dressed in a flag,

They did one and all lag,

Awaiting for it to unfurl.— *Exchange.*



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



Bureau of Information

November 8, 1917.

Dear Mr. French:

Your pleasant letter of November 1 has just reached me here, in New York, where I have just arrived, following a tour of the military camps. In order to take advantage of your kind offer to state the needs of the Photographic Division, Signal Corps, I am submitting for publication in your influential magazine the following lines:

The immediate need of the Photographic Division, Signal Corps, is for men who are thoroughly experienced workers in photographic laboratories—especially men who have been trained in the laboratories of the big newspapers and of the illustrative news syndicates, and who, consequently, are accustomed to work with speed. These men are required for the task of developing plates and films exposed from airplanes for reconnaissance-purposes. The value of such pictures lies largely in the rapidity with which the developing and printing can be done. For this service only men of a special aptitude for such work can be used—high-grade, intelligent and experienced photographers to whom the time-factor is more than a name. Indeed, the small units of photographers to be assigned to operate with the airplane-pilots and observers must be a highly select body of men. If, as it has been aptly said, the "airplane is the eye of the army," so the camera may be said to be the eye of the airplane, and the responsibility that now rests upon the photographer is of the greatest. Never before in history has the photographer been called upon to play so vitally an important part in the world's drama.

Next in importance to these field laboratory men are the camera-men, both motion-picture and still operators. In this branch of the service the American news-photographer is expected to be supreme. Here, again, however, only experienced men can be used—men who have had professional training as news-photographers. Only in exceptional cases, when men draw special qualifications in the military-training camps for photographers and in the schools of instruction for military photographers, will men of only limited experience be assigned to news-camera-work. Photographers whose experience has been limited to studio or amateur work, but who may be temperamentally fitted for news-camera-work, and who have never had the chance to develop this phase of photography, will be given ample opportunity to demonstrate their fitness. In brief, the Photographic Division can use laboratory- and camera-men who have had practical, professional experience. Only the best men in the country are being called upon for this task; inexperienced and incompetent men will be quickly plucked. The standards must necessarily be the highest—in personnel and in equipment—if the great responsibilities put by modern warfare on the Photographic Division are to be met as they must be and will be. The Photographic Division of the Signal Corps is establishing itself as the greatest organization of photographers not only in this country but in the world. PHOTO-ERA may be an important factor in this task if it will place before the photographers of the country a knowledge of these needs and call into the service of their country a select and trained

group of men who now have the opportunity to render a more important duty than ever before.

Men selected in this service will be regularly enlisted in the Signal Corps and will be given military instruction in the special Signal Corps camps as well as training in military photography in the schools of aerial photography that are being established for this purpose. The qualifications for both men and material (it may be explained in passing) must necessarily be higher than those imposed by the trade. Indeed, the training of an "official photographer" in the army begins where the training furnished by the trade leaves off.

Studio-proprietors who appreciate this great opportunity, and who, though having first-class practical experience, have not the necessary physical qualifications, can do their bit by urging their younger assistants, of genuine ability, to offer their services to their country.

For further information address the Chief Signal Officer of the Army, Photographic Division, Washington, D. C.

KENDALL BANNING,
Major, Signal Corps, U. S. R.

Enlist Your Lens in the U. S. Army!

THE chief Signal Officer requests that the widest publicity possible be given to the following appeal:

People of the United States are asked to help the Signal Corps of the Army get lenses enough for cameras for the fleet of observation-airplanes now being built. The need is immediate and of great importance; the camera-lens is the eye of the Army.

German lenses can no longer be bought in the open market. England had to meet this same difficulty in the earlier stages of the war by purchasing the lenses of the required type from individual owners. England is now making lenses better than the German ones formerly imported, but no faster than needed for her own uses. The Bureau of Standards of the United States Department of Commerce is now perfecting a substitute for the German "crown-barium" glass used for lenses, and American manufacturers will later be able to meet the needs with special lenses of new and improved types now being designed for this work.

The present situation, however, is that with airplanes soon to be ready for service, suitable lenses cannot be bought. Possessors of the required types are urged to do their bit by enlisting their lenses in the service of the Army. They are asked to immediately notify the Photographic Division of the Signal Corps, U. S. A., Mills Building Annex, Washington, D. C., of lenses of the following descriptions which they are willing to sell, stating price asked:

(1) Tessar Anastigmat Lenses made by Carl Zeiss, Jena, of a working-aperture of $F/3.5$ or $F/4.5$, from $8\frac{1}{4}$ to 20 inch focal length.

(2) Bausch & Lomb Zeiss Tessars, $F/4.5$, from $8\frac{1}{4}$ to 20 inch focal length.

(3) Voigtlander Heliar Anastigmat Lenses, $F/4.5$, $8\frac{1}{4}$ to 24 inch focal length.

Practically all of the lenses of these types in America will be required, but the $8\frac{1}{4}$ inch lenses are most urgently needed.

(4) 8, 9, 12 and 14-inch condensers are wanted; also, a number of Bausch & Lomb Zeiss Protars VII A No. 13, preferably set in Volute shutters.



LONDON LETTER



THE London Salon of Photography opened on the 14th of September with the usual private view, which was well attended. It is the one day in all the year that we are sure to meet certain old photographic friends, and this alone gives the private view an added interest to many, for a few minutes of concentrated talk on a subject so absorbingly interesting as photography with a cotemporary who has marched with us for years, and knows the traditions, the difficulties and the possibilities of the art, is an affair very different from ordinary, polite conversation. It is really live chat. Salon private views vary in interest, and each has an atmosphere of its own, emanating no doubt partly from the personalities present; but more, still, from the particular ideas that are for the moment predominant in the photographic world. We can remember hilarious, densely crowded views in which there has been no chance for any one to look at the pictures, or do anything but talk, laugh and drink tea. To-day, things are different. The tea has gone, the laughter, alas, has departed, and naturally there is a sober and a grave element abroad. And not without reason; for every one has lost friends and relatives in this war, and, perforce, hilarity is out of place where so much suffering is brought so near us. Even the familiar figure of the attendant, Oliver, who, many years ago, used to hold up pictures for our consideration on Judging-Day, asking, chalk in hand, if it was to be a "Hay" or a "B," has had his turn at fighting, for he is an old Navy-man, and returned to the senior service on the outbreak of war, going through the experience in a mine-sweeper. Now he is back at his post (being considered over age for the Navy in these strenuous times) and is again welcoming visitors and old friends to the Salon.

Undoubtedly it is a good show, especially for the fourth during the war, and there is much first-class work that would be sure to attract attention wherever it was hung. Several exhibitors of long standing, being too busy, or not in the mood to produce new work, have gone back and found prints that have not been shown previously. And the exhibition, as a whole, is none the worse for these pictures. But there is no gaining saying that the judges, this year, have been too soft-hearted, a fault that nearly always makes its appearance, and they have accepted a good number of photographs whose absence would undoubtedly have strengthened the show. We looked at several prints, especially on the screens, tiresomely placed down the middle of the gallery, and, as old judges, could not help at least in thought catching the old plea, "Well, it's only a little one," that must again have been on the lips of the selectors, this year. There are 393 photographs hung out of more than 4,000 sent in, and if a round fifty had blessedly found themselves legs, and run away before the doors were opened to the public, well — "They never would be missed," at least artistically speaking. But who are we that we should carp at this fourth War-Salon? Surely it is achievement enough to have collected an undoubtedly strong and refreshing show in such times — one that is international, representing the peoples of nearly the whole world except "Teutonia." There are prints from Canada, Australia, South Africa, Egypt, India, Spain, Portugal, Holland, Scandinavia, Japan, and America is particularly well represented. The organizers may well be proud of the fact that they have got together the only photographic exhibition to be held this year in a metropolitan public

gallery, a circumstance which in its way perhaps demonstrates war's uncanny knack of subscribing to the doctrine of the survival of the fittest! The difficulties were immense — apparently, near the last moment, almost unsurmountable. First of all, it has to be realized that the backbone of the show (the English pictorial worker) is forbidden the use of the camera in seventy-five percent of the British Isles, and under very grave penalties, too, so that many of his happy hunting-grounds are forbidden areas. Foreign exhibits seem to have had almost more difficulty to reach our shores than sugar, and perilously near the opening-day there was a scare that they would not arrive in time. We are all alive to the present transport-difficulties, but in this case they were complicated by entry-forms that had to make the journey across the Atlantic, there and back, most of which arrived only after the show was open. And yet by some miracle the catalogs were there with the correct names of the pictures! All prints were sent in unframed and glass had to be procured. The usual Salon supply was exhausted, and glass is now almost as scarce as — well, sugar. But glass had to be found, and was found, to cover these 393 photographs, although it came almost to a case of begging, borrowing and stealing. We have touched lightly on a few of the more obvious difficulties in the road, but there were many other and more subtle obstructions in the way.

Then, "How was it done?" no doubt thinks the reader. That is a question that for very good reasons does not get answered in English photographic papers, and we may let the American public into a secret that will certainly not be divulged in print on this side.

The British part of the war in Flanders is conducted, as we know, by Sir Douglas Haig, and Mr. Lloyd George is the master-spirit on this side of the Channel. Well, Mr. Mortimer, editor of *The Amateur Photographer*, besides being in his spare time a very efficient Special Constable, is for the moment the Haig-Lloyd-George of photography. He summoned his solid phalanx of infantry (the British pictorialists) around him, and by infinite patience and perseverance got together the useful battalions from foreign parts. The barrage went forward, and under cover of it the Salon of 1917 was achieved, and we may say truly that almost "alone he did it." A few of the pictures merit special mention, even to a public so far off as that of the States, and we hope to refer to them in our next letter.

One of the old photographic friends whom we met at the private view was Mr. A. H. Blake. "Why have you sent no fresh work to the show?" we asked, and, like so many others, Mr. Blake told us his reasons for giving photography a temporary rest. He has developed his lecturing-gift and is using his intimate knowledge of London, and there is no one knows London, old and new, like Mr. Blake. Now, it seems, instead of illustrating his lectures with lantern-slides, he illustrates them with actual things, and when his subjects are people, he points to their counterparts in waxwork!

This may sound rather puzzling to American readers, so let us hasten to explain. Mr. Blake's lectures are called "Blake's Walks." Instead of in a hall, Mr. Blake meets his audience in the open air and acts as cicerone to places of interest, which he can make a good deal more interesting. For instance, one "Blake Walk" is called "The Tale of Two Cities." We see the old Whitehall Palace, visit its remains underground, view the relics of the Greycoat School, admire (intelligently!) the old Parliament House, hear about the Hermit of Westminster, and the history of Vincent Square, etc.; and Mr. Blake has made the old happenings so real to us that we shall never tread that ground again without a thrill. His descriptions are always vivid and accurate.

Then there are "Cosmopolitan Evenings" in London, when Mr. Blake escorts his party to tea in France, dinner in Italy, to see a Yiddish play at the Ghetto and to supper in Chinatown.

And now to come to Mr. Blake's waxwork illustrations. These are used when he meets his audience at Madame Tussaud's and lectures on such subjects as Geoffrey Chaucer, the Death of Nelson, Abraham Lincoln, Napoleon in Exile, etc.

Our excuse for taking up so much of our cherished space over this new development of lecturing, when the illustrations are no longer photographic, is that it has interested greatly the Americans now in London. Mr. Blake always numbers a good many among his audience, and they are his favorites, being, as he expresses it, "so live and so keen."

The Bromide Show, organized by Kodak Ltd., is now open at the Camera Club. We were on our way to it on its second day, but a "Take Cover" warning drove us into a tea-shop. By the time we were allowed out, our train home was due, and we had to put off our visit and our report till next letter.

CARINE AND WILL CADBY.

Prize Contest Open to All Alumni

MRS. C. H. JAEGER, the wife of Dr. Charles H. Jaeger of the College of Physicians and Surgeons, and for some time a student at Teachers' College, offers three prizes for the best photographs of the buildings and grounds of Columbia University, including Teachers' College. The limit is that prints shall be made as permanent as possible and mounted ready for an exhibition to be held next winter.

Any student of Teachers' College, or of any other part of Columbia University, may submit prints. The contest will close December 16, 1917, after which time the three prizes, of \$75.00, \$25.00, and \$15.00, will be awarded. For further information, address Professor Arthur W. Dow, Teachers' College, Columbia University, or Mr. Clarence H. White, School of Photography, 122 East 17th Street, New York City.

Portland Camera Club's Exhibitions

THE PORTLAND (MAINE) Camera Club has been showing recently, in its assembly-rooms, at the Portland Society of Art, an exhibition of twenty-nine pictorial photographs by Dwight A. Davis, of Worcester, Mass., which has been greatly admired.

During this season, the club will have frequent one-man shows from some of the best photo-pictorialists in the country, including Dr. A. D. Chaffee, of New York, and E. H. Weston, of California.

Hooverized Photo-Paste

PERSONS that use paste put up in jars may be interested to know that dried-up remnants need not be thrown away, but may still be utilized. This advice applies particularly to a certain popular white photo-paste that has been recently advanced in price. Consumers who find that through neglect their paste has dried into a hard mass should not be wasteful and throw it away, but prepare it for future use in this way: Pour a small quantity of water over the caked mass, screw on the top of the jar and set it aside to soak overnight. The next day it will have become a soft, pliable mass. By stirring it with a stick or a spoon, one can soon restore the paste to its former semi-solid condition — and as good as ever. I have tried it, so I know. Such is Hooverized paste.

W. A. F.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

EVERYMAN'S CHEMISTRY — The Chemist's Point of View and His Present Work. By Elwood Hendrick. 374 pp., cloth binding, \$2.00 net. New York and London: Harper and Brothers.

To many laymen the subject of chemistry is a closed book; but thanks to Mr. Hendrick's accurate, yet entertaining, style the subject is presented in a manner within the understanding of the average reader. The book treats first of General Chemistry, in which is included timely business anecdotes and good-natured comment. Then, the subject of Inorganic Chemistry is considered, with observations on the different elements and their compounds. The third division includes Organic Chemistry and the discussion of coal-tar products. The effect of the war on the chemical independence of the United States is emphasized and treated intelligently from established facts. The relation that the chemist holds to modern business is brought out convincingly. The amateur and professional photographer will derive much accurate and eminently practical chemical information from a thorough reading of the book. Although it does not profess to be a complete treatise, the book contains the essential, workable facts that will help the photographer to an intelligent use of chemistry in his daily work.

THE ROMANCE OF MODERN PHOTOGRAPHY — Its Discovery and Its Achievements. By Charles R. Gibson, F. R. S. E. 345 pp., including 52 illustrations. Decorated binding, \$1.50 net. London: Seeley, Service & Co.; Philadelphia: J. B. Lippincott Co.

Turning from the textbook, with its cold facts and formulae, the photographic worker will find pleasurable diversion in the attractive pages of Mr. Gibson's "Romance of Modern Photography," which is a delightful and fascinating recital of the dawn to the midday of photographic practice. In twenty-three chapters of surpassing interest are told the achievements of the three great photographic inventors — Niépce, Daguerre and Talbot; early practical methods; cinematography; color-photography; book-illustrations; photo-criminology; radiography (misnamed X-ray photography); photo-micrography; telegraphic photography; stellar photography; nature's camera; stereoscopic photography; pinhole photography; photography and science, and telephotography. To ensure the accuracy of the author's statements, eminent scientific authorities aided in the work.

For the benefit of the studious reader, the appendix presents a synopsis of historical incidents, names and dates, arranged chronologically, and in convenient form.

To add a figure to a landscape serves to increase its interest and its beauty — provided it is appropriate in character and attire, gracefully posed, properly placed and devoid of self-consciousness. In many cases this feature in the landscape has been sadly neglected, and the figure, instead of adorning the view, depreciates if it does not actually spoil it. — WILFRED A. FRENCH.



WITH THE TRADE



New Inexpensive Color-Prints

UNDER the copyrighted name of "Phototones," a new series of photographs in natural colors has been introduced by a Boston firm. These color-prints measure about $7\frac{1}{2} \times 9\frac{1}{2}$ inches and are mounted on large white cards. The original of a Phototone is a direct photographic print colored from color-memoranda by an expert colorist. The color-reproductions in facsimile are made by a special mechanical process, five successive tints superimposed on a black impression. The results are exceedingly beautiful, and in effect equal to the most artistic hand-colored photographs. The aim of the publishers is to place these new color-photographs within the reach of persons of limited means, who, as is shown by large and increasing sales of these color-pictures of the scenic beauties of New England, have been quick in their appreciation. The price is placed at 50 cents per mounted print. Stocked by picture-dealers. For full particulars, address Phototones, Inc., 394 Atlantic Avenue, Boston, Mass.

Rapid Photo-Coloring

THE crowds who witnessed the three-day demonstration by B. F. Roehrig, maker of Roehrig's Transparent Oil-Photo-Colors, of his own product, at the store of the Robey-French Company, 38 Bromfield Street, Boston, recently, were loud in their praise of the remarkable ease, smoothness and speed with which a photograph can be colored. What takes usually an hour or more to do, in the nimble hands of Mr. Roehrig required only a few minutes, and we are sure that, with little practice, any intelligent person can soon rival this gentleman's beautiful results. Mr. Roehrig has given similar demonstrations in other cities of the East and informs us that this method of advertising has resulted in photo-dealers stocking the Roehrig colors liberally. Mr. Roehrig is fortunate to have the high-class pigments to enable him to manufacture his peerless colors, and which are in great demand for coloring or tinting photographs, engravings, halftones, postcards and other pictures. Inquire of your dealer.

Splashes of Palette-Wisdom

A UNIQUE and attractive form of advice to amateur-colorists is a small black cardboard-palette with six round disks of color. On the back are six "splashes" of advice on how to mix pigments and apply them. The whole scheme is clever, artistic and original, and is the result of a little gray matter emanating from J. W. Johnston, maker of Snow White, Fine Arts Building, Rochester, N. Y. A request, with 10 cents in stamps for postage, will bring one to you.

New Catalog of David Stern Company

THE attractive new catalog of the David Stern Company, Davsco Building, 1027-1029 West Madison Street, Chicago, was received too late for mention in November PHOTO-ERA. Its striking feature is that photographs are used to excellent advantage to show the size of picture made with the cameras listed. An illustrated introductory chapter, "The Choice of Apparatus," is of value to every intending purchaser. In addition, there are other short articles: "The Pocket-

Camera," "Plate-Cameras," "Amateur Photo-Finishing," "Choosing a Lens," "Graflex Cameras," "Motion-Picture Photography," "Exposure," "Ray-Filters," and a glossary, "Terms Often Used in Photography." These features, combined with the many cameras, lenses and photo-accessories listed, make up a catalog that readers of PHOTO-ERA should obtain.

A Warning Against Camera-Swindles

TO the inquiries regarding a certain motion-picture camera, offered to the public at an absurdly low price, we would state that *all* cameras, lenses and photographic material advertised in the pages of PHOTO-ERA MAGAZINE are absolutely reliable and worthy the confidence of the public, and PHOTO-ERA endorses them!

Persons who are so foolish as to believe that a manufactured article is worth no more than the cost of materials put into it deserve no sympathy — else the article, itself, is a sham. Or it may be the old, successful trick — to advertise, and to use the replies received as a bait with which to obtain capital or to sell stock, while an unsuspecting public has lent its aid to a swindling scheme — for a really honest enterprise need resort to no such devious methods. It is up to the advertiser, and not to PHOTO-ERA, to supply proof that the article offered the buying public is in every way satisfactory; but the new camera lacks even tangible form.

Dishonest purveyors avoid PHOTO-ERA as the Devil shuns Holy Water, for they know the meaning of the PHOTO-ERA Guaranty and dislike to have their advertising-offers turned down.

War-Prices

ELSEWHERE in this issue we have referred to the epidemic of price-raising — all along the line, whether warranted or otherwise. Happily, photo-manufacturers and dealers have advanced prices only in cases where the initial cost of production has made it absolutely necessary. War-taxes, of course, are unavoidable. Every photo-dealer whom we have consulted declares that in no case will prices be raised, except when forced to do so, and then only with reluctance. Expensive equipments, naturally, are subject to relatively larger price-increases, owing to scarcity of certain raw materials. One thing is sure — photo-dealers and manufacturers are not robbers; witness sale of roll-films at the old prices since the beginning of the war!

Another Photo-Editor Heard From

WREN, with pardonable pride, Editor Juan C. Abel drew attention to his son's service in Uncle Sam's army, recently, his brother-editors maintained a conservative silence. But when the Editor of PHOTO-ERA broke the ice — which he did in a recent issue — up pops Editor Chambers, bashfully suggesting that he, too, ought to be credited with a contribution to Uncle Sam's army. This, it is our pleasure to announce, is Dr. Francis L. Chambers, in the United States Medical Reserve Corps with the rank of Lieutenant — the only child of Frank V. Chambers.

There remain Editors Fraprie, Watkins, Clute and Tennant to be heard from.

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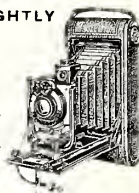
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FURTHERMORE, the Publisher reserves the right to refuse appli-
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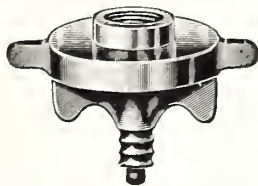
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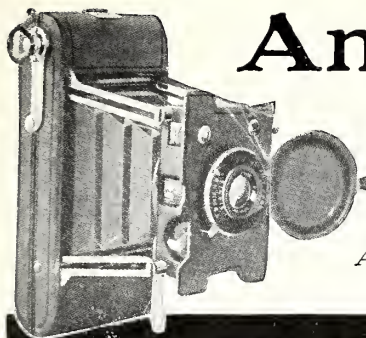
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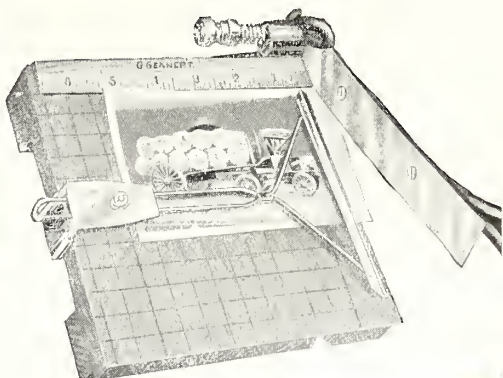
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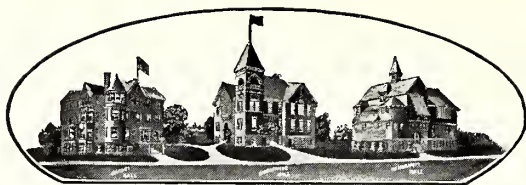
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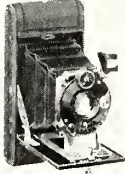
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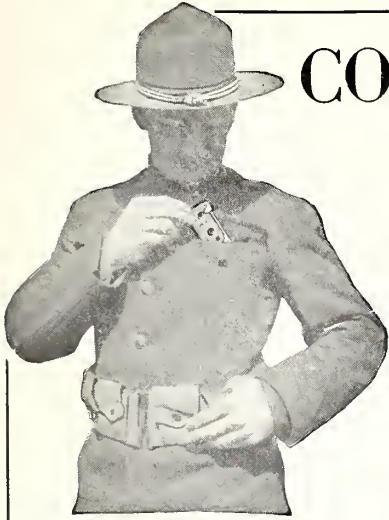
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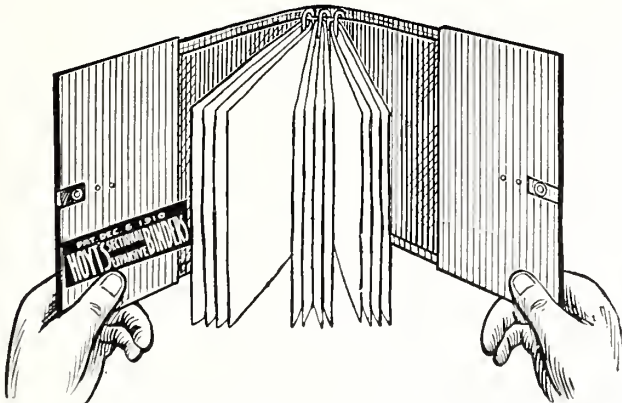
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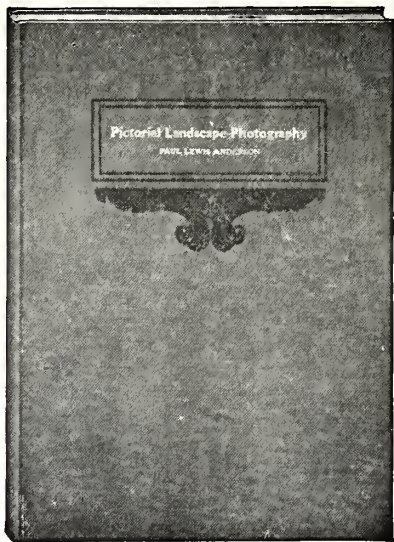
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by Paul Lewis Anderson

Mr. Anderson's book has permanently taken its place among the standard photographic works of the day and thus corroborated our early estimate of its worth. The entire first edition has been exhausted, and it became necessary to prepare a second edition in order to fill the orders which, during the past few months, have been arriving in larger numbers even than when the work was first published.

Henceforth this beautiful volume will occupy an honored position in photographic literature; first, because the subject is one of interest to everybody; and second, because the author is not merely a theorist or art-critic, but a practical photographer of high repute, exceptional erudition and rare ability. Not only does he analyze, describe and discuss in a masterly manner those qualities desirable in the finished picture intended for exhibition or other art-purposes, but he indicates in detail how to obtain them by photographic means, particularly in respect to working-up the negative and printing. In this respect the book is so unique that no photographic library is complete without it.

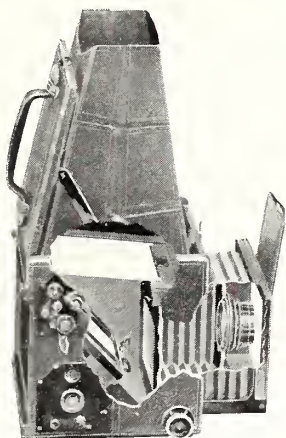
Large octavo, 7 $\frac{1}{4}$ x 9 $\frac{3}{4}$ inches, cloth-bound, printed on heavy antique paper, with fourteen superb full-page plates, price \$1.50 net.

SPECIAL OFFER

Photo-Era, or any \$2.00 magazine, 1 year . . .	\$2.00	} BOTH FOR
Pictorial Landscape-Photography . . .	1.50	
By Paul Lewis Anderson	\$3.50	
		\$3.00

PHOTO-ERA MAGAZINE, 367 Boylston St., Boston, U. S. A.

GRAFLEX CAMERA

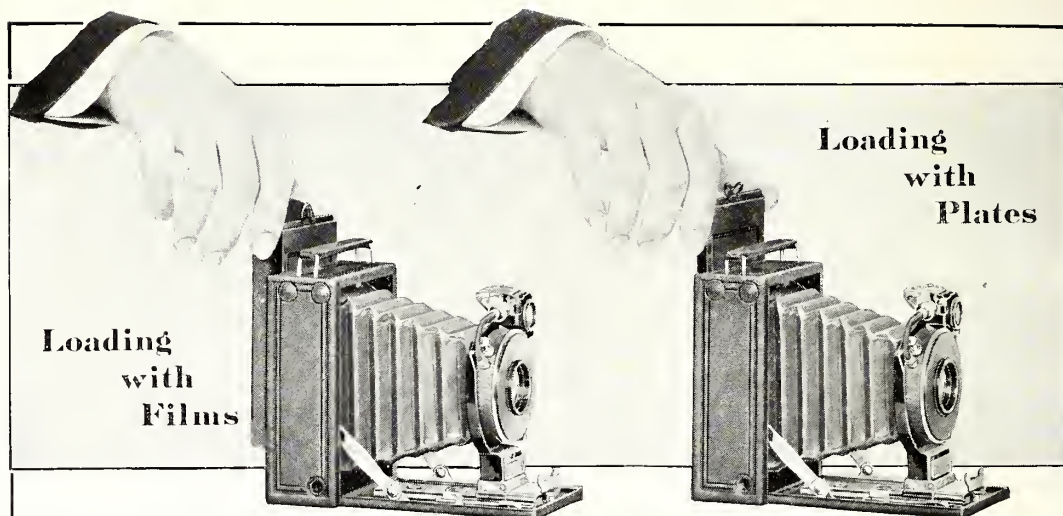


Looking into the Graflex Focusing Hood

you see a brilliant, *full negative size* image of the subject you are about to photograph. As you advance or recede from the subject, watching the changing composition and expression, *accurate focus* is constantly maintained by a slight adjustment of the focusing button, then—a pressure of the shutter release and the desired pictorial effect is secured *instantly*.

Ask for 64 page Graflex Book, free
at your dealers or by mail

FOLMER & SCHWING DEPARTMENT
EASTMAN KODAK CO
ROCHESTER, N. Y.



Really two cameras in one

PREMO No. 12

And it is such a small, such a thoroughly capable one, too. It is at once a plate or a daylight loading film camera. One method may be employed as easily as the other. It's just as the user chooses.

Focusing and composing may be done by use of finder and focusing scale, or at any time, for absolute accuracy the ground glass screen is easily used with either film or plates.

The camera makes $2\frac{1}{4} \times 3\frac{1}{4}$ pictures, it measures $1\frac{5}{8} \times 3\frac{1}{4} \times 4\frac{5}{8}$ inches, it weighs but 24 ounces, but it is so cleverly constructed that it will accommodate a three-hundredth of a second shutter, and the best and speediest of anastigmat lenses, including the Kodak Anastigmat $f.6.3$, and the B. & L. Ic Tessar $f.4.5$. With such equipments

and its careful, accurate mechanical construction, the Premo No. 12 offers the very limit of photographic efficiency—it will make good pictures wherever amateur pictures can possibly be made.

The negatives, while of good size for contact prints, are of such quality that enlargements may be made from them to any reasonable size.

For those who do not care for the high speed lenses, the same camera is supplied fitted with Kodak Ball Bearing shutter and either Rapid Rectilinear or Kodak Anastigmat lens, $f.7.7$.

Thin, smooth, richly finished, this will make a faithful, unobtrusive biographer of your personal experiences.

Price, \$15.00 to \$56.00.

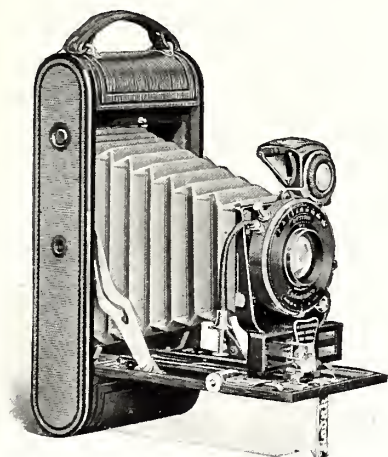
Premo catalogue free at your dealer's, or mailed by us on request.

Rochester Optical Department, Eastman Kodak Co., Rochester, N. Y.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

1A Autographic Kodak *Special* 1917 MODEL



Even the unembellished list of features incorporated in this new camera tells the story of its photographic fitness.

For example :

Kodak Range Finder,

Fast anastigmat lens,

Optimo shutter speeded to 1/300 of a second,

Autographic attachment,

Specially refined finish.

These features alone insure a Kodak that may well be termed *Special*; and the rest of the camera appointments are in strict keeping.

The Kodak Range Finder which is built into the 1A *Special* is the latest practical improvement in amateur photography. Through its means correct focus is *established*—not guessed at. There is no necessity for estimating distances with the eye—the Kodak Range Finder finds the focus for you—readily and with the accuracy of careful measuring. The Range Finder is an

exclusive feature of the 1A and 3A Autographic Kodaks *Special*. Drop in at your dealer's, inspect either of these instruments and try out the efficiency of the device for yourself. You will readily understand that the 1A *Special* would be incomplete without it.

The lens and shutter equipment of the 1A *Special* is all that it should be. The Optimo shutter with adjustable speeds from one second to 1/300 of a second is the best kind of a companion for the fast, sharp-cutting anastigmat lenses with which the camera is listed.

The camera has rising front, brilliant reversible, collapsible finder, rack and pinion for focusing and the regular focusing scale in addition to the Kodak Range Finder. It is handsomely finished throughout with finest quality long grain calf, the bellows is of selected black leather and the metal parts are highly nickelled.

Compact, there's plenty of room for it in the pocket, dependable in the real meaning of the word, the 1A Autographic Kodak *Special* is, exactly as the name indicates, a specially fine Kodak.

DETAILS—For rectangular pictures, $2\frac{1}{2} \times 4\frac{1}{4}$ inches. Capacity, 12 exposures without re-loading. Size of Kodak, $1\frac{5}{8} \times 3\frac{3}{4} \times 8$ inches. Weight 32 ounces. Lens, Kodak Anastigmat, speed, f 6.3, focal length, 5 1-16 inches. Shutter, Optimo. Two tripod sockets. Brilliant, reversible, collapsible mask. Rack and pinion for focusing.

Price

No. 1A Autographic Kodak, <i>Special</i> , Kodak Anastigmat lens, f 6.3, Optimo shutter,	\$45.00
Ditto, with Bausch & Lomb Kodak An- astigmat, f 6.3 lens, $5\frac{1}{4}$ -inch focus, . .	49.00
Ditto, with Bausch & Lomb Tessar Series Hb Anastigmat lens, f 6.3, $5\frac{3}{8}$ -inch focus,	59.50

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Eastman Kodak Company

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KODAK VELVET GREEN.

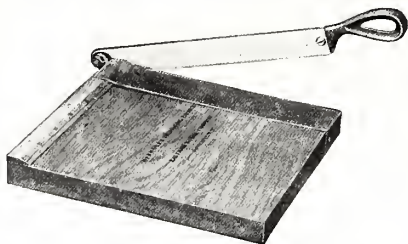
Here is a photographic paper that gets into the spirit of the picture. There is a hint of the out-doors, of booming surf and rustling leaves, in its rich, warm green tone. For landscapes and marines, Kodak Velvet Green fits.

And one of the splendid things about Kodak Velvet Green is the fact that the unusual effect is secured through the simplest possible means. It works very much like Velox and is just as easy to manipulate. The tone is secured without re-developing and with chemicals regularly used in Velox work.

The surface of Kodak Velvet Green is a smooth, semi-matte which brings out details fully. It is supplied at Velox prices in both single and double weights.

Send a post-card on Kodak Velvet Green to the folks back home at vacation time. Exposure is by daylight so that prints can be made conveniently even when you're roughing it.

Kodak Trimming Board



An inexpensive trimmer made of hard wood with a good quality steel blade and fitted with rule. The Transparent Trimming Gauge at an extra cost of \$.25 will prove itself a profitable investment.

THE PRICE.

No. 1, capacity, 5 x 5 inches.	- -	\$0.50
No. 2, capacity, 7 x 7 inches.	- -	.70
Transparent Trimming Gauge (extra)		.25

Eastman Special Developer

CLEAN—

Does not stain the fingers.

ECONOMICAL—

Note the price.

CONVENIENT—

A universal developer equally successful for plates and film (tray development) and paper.

THE PRICE.

Cartons of five powders in glass tubes,	- - -	\$.25
Cartons of six powders, paraffine wrapped,	- - -	.25

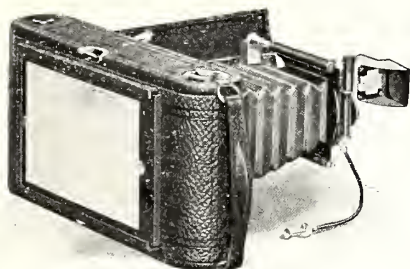
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Eastman Kodak Company

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COMBINATION BACK



Showing Combination Back Fitted to Kodak.

Although the Nos. 3 and 3A Autographic Kodaks are primarily intended to be used with film, the Combination Back makes it a simple matter to use plates whenever this seems advisable. Slip the regular back off and clap the Combination Back on—that is all there is to it. With the Combination Back in place the Kodak may be used for either plates or film—focusing with film being done with the regular focusing scale while plates offer the advantages of ground glass focusing. There is no room on the Combination Back, however, for the autographic attachment so that the regular back must be retained for autographic photography with autographic film.

The Price

Combination Back

For Nos. 3 and 3A Autographic Kodaks \$3.50

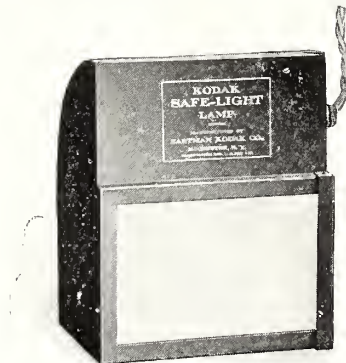
For Nos. 3 and 3A Autographic Kodaks,
Special - - - - - 4.00

KODAK SAFELIGHT LAMP

Price \$3.00

The Kodak Safelight Lamp is constructed on the principle of safety first and then—all the illumination possible. With this lamp in the dark room you can see to work and yet you know it's safe. The lamp is regularly supplied

with a 5 x 7, Series I Safelight for use with films, or plates not color sensitive.



Extra safelights of other series may be obtained as noted below.

Series 00—Yellow light, for use with gaslight papers.

Series 0—Bright orange light, for use with bromide paper and lantern plates.

Series 1—Orange safelight, for use with films, or plates not color sensitive.

Series 2—Safelight, for extra rapid orthochromatic plates sensitive to green but not red.

Series 3—Green safelight, for use with red-sensitive panchromatic plates.

Series 4—Bright green safelight, for use with ordinary plates, for those who cannot use a red light. Not safe for orthochromatic plates.

5 x 7 (any series), each - - - \$0.50

What the Kodak Film Tank does for films, the

EASTMAN PLATE TANK

does for plates, producing fog-free negatives of highest obtainable quality with the maximum of convenience.

For the amateur using plates the Eastman Plate Tank is a real necessity.

THE PRICE.

Eastman Plate Tank, for 4 x 5, 3¼ x 5½, and smaller plates, includes solution cup, plate cage, loading fixture and adjustable kit, -	\$4.00
Ditto, 5 x 7, without kit, -	5.00
Separate Kits, for 5 x 7 tank, to take 3¼ x 5½, 1¼ x 6½ or 1¼ x 6½ plates, each, -	.75

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The colors that nature puts in the summer landscape, you can put in the landscape print with



VELOX TRANSPARENT WATER COLOR STAMPS

Simple to apply, these self-blending colors will produce artistic and effective results for any one—even the novice.

Splendidly adapted for the coloring of lantern slides.

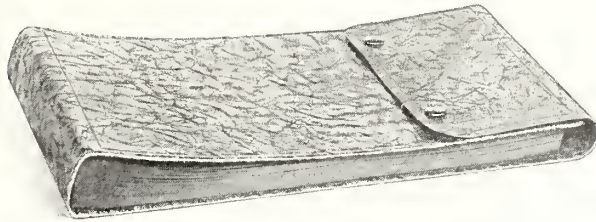
THE PRICE.

Book of Velox Water Color Stamps (12 colors),	-	-	-	-	\$.25
Complete Velox Water Color Outfit, including book of color stamps, three brushes and palette,	-	-	-	-	.75

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At your dealer's.

For your vacation prints



The HERCULES ALBUM

The genuine leather covers are flexible and the flap with clasp keeps the leaves from spreading even when the album is filled.

A large pocket makes a convenient receptacle for prints awaiting mounting.

Fifty black leaves bound inside of cover with silk cord.

The price of the Hercules Album ranges from \$2.85 to \$5.50 according to size.



The KODAK ALBUM

In this album pocket strips take the place of paste so that although the prints are firmly in position they may be removed at any time without injury. It is the work of an instant, of course, to slip the prints in the strips.

Handsome grain leather cover—black leaves with linen finish.

Price ranges from \$3.00 to \$4.25 according to size.

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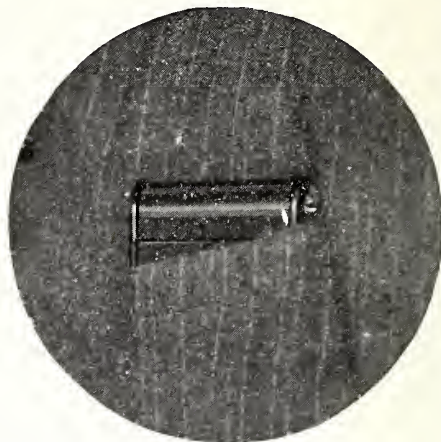
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Your other camera.

A Vest Pocket Kodak

(Pictures $1\frac{5}{8}$ x $2\frac{1}{2}$ inches.)

Although you have a grand-father's clock in the hall, a Dresden clock on the drawing-room mantel, an alarm clock in your bed-room, a chronometer in your motor car and an eight day clock on your office desk, you always wear a watch.



Similarly you may have and carry other cameras—you *wear* a Vest Pocket Kodak. It's the accurate, reliable, unobtrusive little Kodak that you can have always with you for the unexpected that is sure to happen.

The Vest Pocket Kodaks are \$6.00. The V. P. K. *Specials* with Anastigmat lenses are \$10.00, \$20.00 and \$22.50.

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JULY

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The American Journal of Photography



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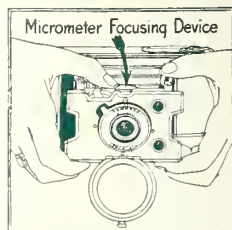
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CAMERAS & SPEEDEX FILM

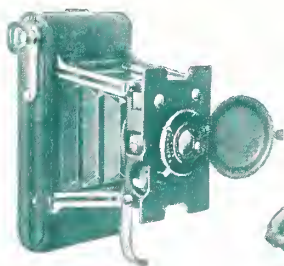
"Put it right over," said Georgie at the bat—and then father snapped the picture with his Ansco Vest-Pocket No. 2.

No interesting scene can escape this handy camera, the smallest and lightest made to take $2\frac{1}{4} \times 3\frac{1}{4}$ pictures, for it gets into action quickly and is easily focused to get the pictures sharp and clear. The negatives make fine enlargements.

See the V-P No. 2 at the Ansco dealer's. Note how it fits in your pocket. Catalog may be had from the Ansco dealer or from us.



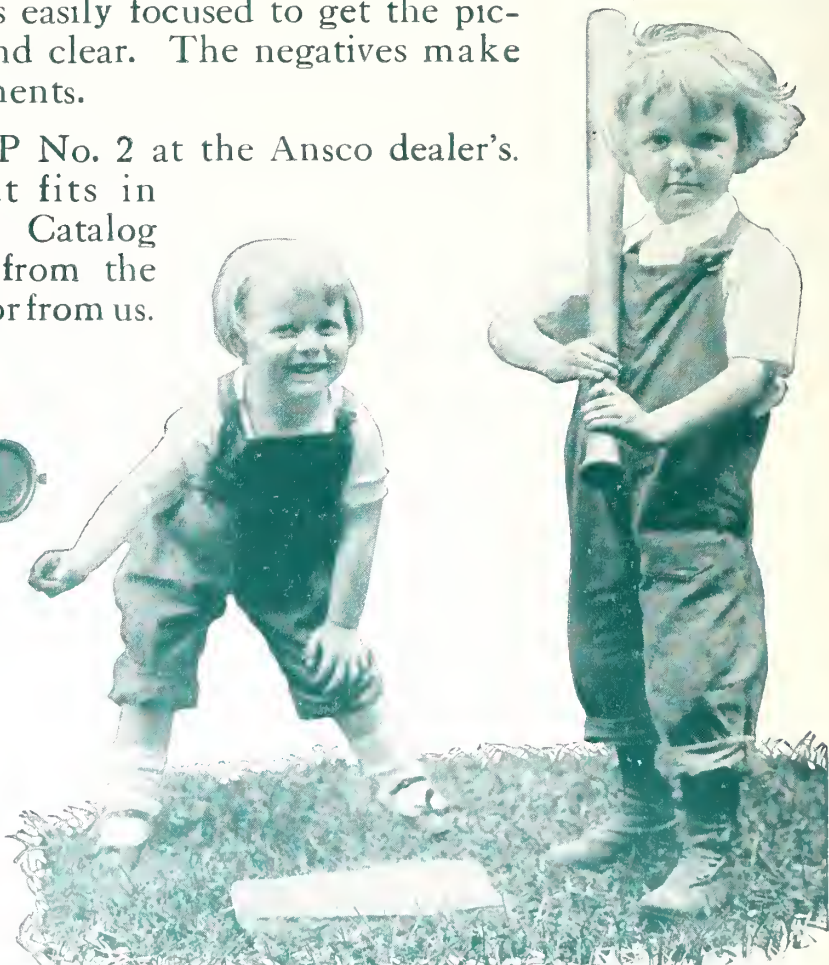
A turn of the thumb gets the picture sharp and clear.



Ansco Vest-Pocket No. 2. Equipped with Modico Anastigmat lens, F7.5, \$18.50; with Ansco Anastigmat lens, F 6.3, in Extraspeed Bionic shutter, \$27.50 Other Ansco Cameras, \$2 up.

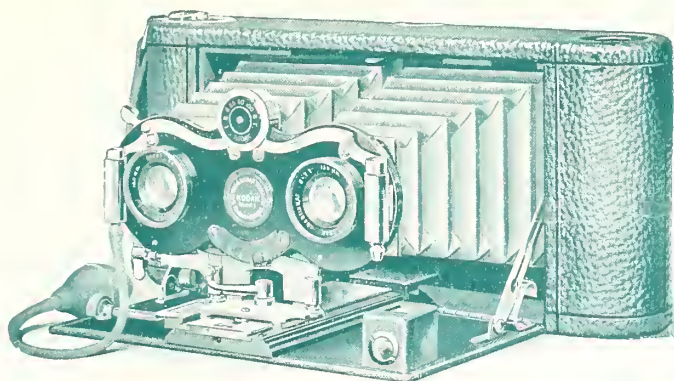


The Sign of the
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ANSCO COMPANY BINGHAMTON, NEW YORK

PHOTO-ERA the Blue-Book of Photographic Advertising



STEREO KODAK

Pictures made with this camera, when viewed through a stereoscope, give a striking effect of roundness, depth, perspective and distance. There is a *realness* to stereo pictures lending them a charm that persists.

The Stereo Kodak puts stereoscopic photography well within the province of the amateur.

PRICE.

Stereo Kodak, Model No. 1 (pictures $3\frac{1}{2} \times 3\frac{1}{2}$ inches), Kodak Anastigmat lenses, <i>f.</i> 7.7, and Stereo Automatic shutter, - - - - -	\$45.00
Black Sole Leather Carrying Case, - - - - -	3.50
N. C. Film Cartridge, 6 exposures, for Stereo (No. 101), - - - - -	.60
Ditto, 3 exposures for Stereo, - - - - -	.30
Stereo Self-transposing printing frame, - - - - -	2.00

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

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Prints by Gaslight

VELOX

A photographic paper that fits any amateur negative.

The good negative deserves it, the bad negative demands it.

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